

AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS BULLETIN

The Socioeconomic and Professional Quarterly for AANS Members • Volume 14 No. 1 • Spring 2005

To Care Is Human

It's Quality That Neurosurgery Must Define

Can Outcomes Research Enhance Patient Care and Satisfy P4P and MCC Demands?

INSIDE THIS ISSUE

- AANS President Stresses Education and Innovation, **5**
- RUC Survey May–August Will Help Decide Medicare Work RVUs, **22**
- AANS Adopts Guidelines for Corporate Relations, **28**
- 2004 DMLR Campaign Experiences Great Success, **38**

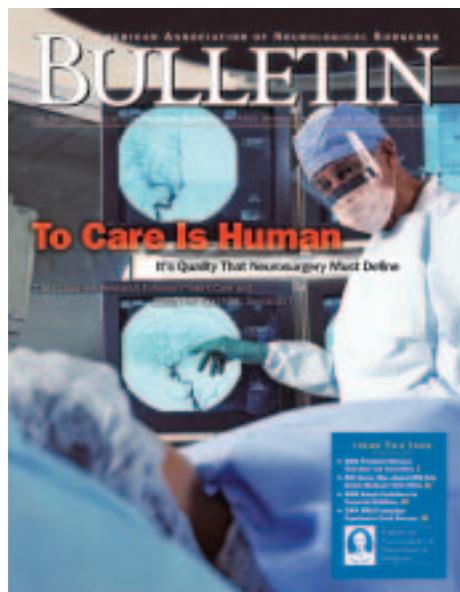


American Association of Neurological Surgeons

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

CONTENTS

VOLUME 14 NO. 1



ON THE COVER

13 | To Care Is Human: It's Quality That Neurosurgery Must Define

14 | Characterizing Quality
The Opportunity of Outcomes Research
Robert E. Harbaugh, MD

17 | Practice Guidelines—Why Bother?
IOM, MedPAC and Others Call for Evidence-Based Quality Care
Mark E. Linskey, MD

18 | P4P for Specialists Gains Velocity
Whether They Improve Quality or Not, P4P Programs Are Coming
Michelle Bertagna and Richard Gliklich, MD

20 | Congress Considers P4P Legislation
January 2006 Implementation Would Affect Neurosurgeons
Barbara E. Peck, JD

21 | The P4P Initiative: How NERVES Can Help
A Practice Administrator Argues for Neurosurgery's Involvement
Mark Mason

PRESIDENT'S MESSAGE

5 | Knowing Where to Put the Power On
Education and Innovation First Among AANS Strengths

Robert A. Ratcheson, MD

FEATURE

36 | Annual Meeting: Neurosurgery Also Means Business
Socioeconomic Programs Support Neurosurgical Practice

Manda J. Seaver

NEWS AND EVENTS

8 | Newsline: From the Hill
Three states pass liability reform legislation.

10 | Newsline: Neuro News
Institute of Medicine calls for a spinal cord injury network.

30 | News.org
The AANS expands functionality of online CME tracking at www.MyAANS.org.

44 | Calendar of Neurosurgical Events
The 13th World Congress of Neurological Surgery is held June 19-24.

OPINION

11 | Personal Perspective
Assessing healthcare quality: Medicare's 2 percent reduction is no idle threat.
James R. Bean, MD

31 | Letters
Reader says more exposure to neurosurgery in medical school can ease ER coverage troubles.
Continued on page 4

CONTENTS

DEPARTMENTS

40 | Bookshelf

New books tackle medical liability, lost idealism.

Cheryl A. Muszynski, MD; Gary Vander Ark, MD

22 | Coding Corner

Neurosurgeons surveyed May–August will help determine Medicare’s work RVUs.

Gregory J. Przybylski, MD

24 | Education

Patient transfers spark town-gown tension.

Deborah L. Benzil, MD

28 | Governance

The AANS adopts guidelines for corporate relations.

Jon H. Robertson, MD

32 | NREF

These NREF supporters donated July 1–Dec. 31, 2004.

42 | NS Innovations

New endovascular technologies are on the horizon for aneurysms and more.

Felipe C. Albuquerque, MD

29 | Residents’ Forum

Outcomes, certification and reimbursement: NeuroLog looms large in the future of neurosurgical residents.

Brian R. Subach, MD

26 | Risk Management

Family limited partnerships are one way to protect personal assets.

Robert Dowd, JD

31 | Timeline

If neurosurgery’s pioneers had been subject to outcomes oversight then, where would neurosurgery be now?

Michael Schulder, MD

38 | Washington Update

The 2004 DMLR campaign posted huge successes, but neurosurgery presses on for liability reform, primarily through NPHCA.

A. John Popp, MD, and Katie O. Orrico, JD

AANS MISSION

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

AANS BULLETIN

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

James R. Bean, MD, *editor*
Robert E. Harbaugh, MD, *associate editor*
Manda J. Seaver, *staff editor*

BULLETIN ADVISORY BOARD

Deborah L. Benzil, MD
Frederick A. Boop, MD
Alan S. Boullos, MD
William T. Couldwell, MD
Fernando G. Diaz, MD
Haynes Louis Harkey, MD
David F. Jimenez, MD
Ali F. Krisht, MD
Patrick W. McCormick, MD
Cheryl A. Muszynski, MD
Katie O. Orrico, JD
A. John Popp, MD
Gregory J. Przybylski, MD
Michael Schulder, MD
Brian R. Subach, MD
Gary D. Vander Ark, MD

DEPARTMENT EDITORS AND CORRESPONDENTS

Deborah L. Benzil, MD (Education); Frederick A. Boop, MD (CSNS Report); Alan S. Boullos, MD (Computer Ease); William T. Couldwell, MD (NS Innovations); David F. Jimenez, MD (Risk Management); Mark Mason (Practice Management); Cheryl A. Muszynski, MD (Bookshelf); Katie O. Orrico, JD (Washington Update); Gregory J. Przybylski, MD (Coding Corner); Michael Schulder, MD (Timeline); Brian S. Subach, MD (Residents’ Forum); Gary Vander Ark (Bookshelf)

WRITING GUIDELINES

www.AANS.org/bulletin

ARTICLE SUBMISSIONS AND IDEAS

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

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

PEER-REVIEWED RESEARCH

The *Bulletin* seeks submissions of rigorously researched articles concerning socioeconomic topics related to neurosurgery. Selected articles will be reviewed by the Peer-Review Panel. Submit articles to the *Bulletin*, bulletin@AANS.org.

Peer-Review Panel led by Mick J. Perez-Cruet, MD;
Deborah L. Benzil, MD; William E. Bingaman Jr., MD;
Frederick A. Boop, MD; Fernando G. Diaz, MD; David F. Jimenez, MD; Lyal G. Leibrock, MD; Mark E. Linskey, MD;
Richard N. Wohns, MD

LETTERS

Send your comments on articles you’ve read in these pages or on a topic related to the practice of neurosurgery to bulletin@AANS.org. Correspondence may be published

in a future issue edited for length, clarity and style.

Correspondence is assumed to be for publication unless otherwise specified.

BULLETIN ONLINE

The current issue and searchable archives to 1995 are available at www.AANS.org/bulletin.

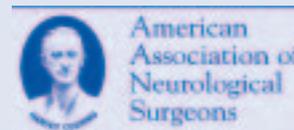
PUBLICATION INFORMATION

The *AANS Bulletin*, ISSN 1072-0456, is published four times a year by the AANS, 5550 Meadowbrook Drive, Rolling Meadows, Ill., 60008, and distributed without charge to the neurosurgical community. Unless specifically stated otherwise, the opinions expressed and statements made in this publication are the authors’ and do not imply endorsement by the AANS.

© 2005 by the American Association of Neurological Surgeons, all rights reserved. Contents may not be reproduced, stored in a retrieval system, or transmitted in any form by any means without prior written permission of the publisher.

ADVERTISING SALES

Bill Scully, Cunningham Associates, (201) 767-4170, or bscully@cunnasso.com. Rate card, www.AANS.org/bulletin.



Knowing Where to Put the Power On

Education and Innovation First Among the AANS Strengths

“Power comes not from power everywhere, but from knowing where to put it on,” wrote Norman Maclean, speaking not of neurosurgery but rather of the graceful art of casting in his book, *A River Runs Through It*, a metaphoric tale of fly fishing and life.

The emergence of spring after a seemingly endless Midwestern winter rekindles thoughts of a humming stream and colorful trout under the vast Montana sky; while I have attempted to suspend such tempting thoughts until after my term as AANS president and the 2005 AANS Annual Meeting have concluded, the strategy Maclean describes so succinctly does have current application to our profession. Whether navigating a complicated neurosurgical procedure, managing the competing demands of a busy practice, or prioritizing the initiatives of your multifaceted professional association, “knowing where to put the power on” is perhaps more an art than a science.

What are the priorities of neurosurgery today? How can the American Association of Neurological Surgeons identify the right priorities and then set and achieve specific goals? These questions I have asked myself, particularly during the past year, and discussed with the Executive Committee and the Board of Directors with input from the 40 or so committee chairs and the more than 200 committee members who comprise the volunteer leadership of the AANS. We may not always agree with one another, but through ongoing deliberations among keen-witted colleagues, the better ideas tend to take hold. And it is those ideas, those initiatives, where we have tried to “put the power on” over the past year.

Furthering Neurosurgical Education

First and foremost, the AANS is an educational organization, and this year a preponderance of the AANS effort has been directed toward education and educational issues. The AANS itself grew out of the need of neurosurgery’s pioneers to learn more and to share their hard won information with one another, with the expectation that as a result, their patients’ outcomes would improve. This is no less true today, although contemporary neurosurgeons are asked to not only manage the tasks of care delivery and learning, but also navigate through multiple layers of documentation and regulations to support the requirements associated with licensure and certification. In the very near future, in addition to state licensure and initial board certification, they will be asked to fulfill the requirements of the American Board of Neurological Surgery’s Maintenance of Certification program and very likely Medicare’s “pay-for-performance” mandates. Through the Washington Committee, the AANS stays apprised of federal



Robert A. Ratcheson, MD

agencies’ developing requirements.

The AANS has put its efforts toward helping AANS members manage the MOC process through the attainment and documentation of continuing medical education credits in fulfillment of these requirements. The American Board of Neurological Surgery has chosen the AANS as the single source to track, validate and store CME requirements for individuals in the MOC program. The AANS’ password-protected Web site, MyAANS.org, serves as the virtual center for CME credit tracking and management. The site, with its new design and continual updates, contains many unique features for managing CME credit, such as customized reports, personalized transcripts, subspecialty transcripts, certificates of credit from AANS-sponsored, jointly sponsored and endorsed meetings, and a new feature that allows members to select a delegate who can manage the entire online tracking process for them. The site provides convenient access to additional CME offerings; these include meetings and courses, as well as the opportunity to obtain CME credits online through *Neurosurgical Focus* and soon, through the *Journal of Neurosurgery*, as well as links to a wealth of pertinent online information, such as the new AANS CME policy for the three-year cycle that began Jan. 1. Members will find the site easier to navigate and responsive to members’ requests and suggestions.

Offering New Member Benefits and Opportunities

Our commitment to neurosurgical education must address the needs of neurosurgery’s next generation. This year the AANS made significant new additions to existing long-time benefits for residents and fellows, which include free AANS membership, the *Bulletin*, free attendance at selected resident-oriented practical clinics at the annual meetings, and access to the online journal *Neurosurgical Focus* and the Online Career Center. Beginning with the April 2005 meeting in New Orleans, residents and fellows now also receive free registration for the AANS annual meeting and free subscriptions to the world’s premier publications for neurosurgical education and research: the *Journal of Neurosurgery*, *Journal of Neurosurgery: Spine* and *Journal of Neurosurgery: Pediatrics*. We have also instituted reduced rates for the courses on practice management and oral board preparation. The AANS has instituted a program which offers neurosurgical residents the opportunity to learn and fulfill the core competency require-

Continued on page 6

Continued from page 5

ments, mandated for all residents by the Accreditation Council for Graduate Medical Education, by viewing selected video lectures online. We have also remembered our more senior members and now offer lifetime members a 50 percent reduction on their annual meeting registration fee.

Two new AANS membership categories, International Residents and Allied members, were approved by the membership in a vote taken last summer. International residents and surgical technicians are now eligible to join the AANS ranks and enjoy the many benefits of membership.

Nurturing Neurosurgery's Future

One of our most important activities is the Neurosurgery Research and Education Foundation. This year the AANS helped fuel neurosurgical research through two Neurosurgery Research and Education Foundation initiatives, the Creating Masters in Neurosurgery campaign, which by January had raised more than half of its annual goal, and the Celebrate a Life tribute and memorial campaign. In addition, NREF membership responded generously to our voluntary appeal which accompanied the AANS dues statement. This year, from a total of 53 applicants, NREF supported four Research Fellowships and five Young Clinician Investigator awards. We are pleased to recognize donors who generously gave during the second half of 2004 in this issue of the *Bulletin*. I know I speak for the entire neurosurgical community in expressing my heartfelt thanks for their generosity. There also has been a change in NREF leadership. We are grateful to Julian "Buz" Hoff, MD, for his seven years of superb leadership under which NREF has grown and contributed greatly to our profession's research efforts. Martin Weiss, MD, assumed the chair of the NREF in October 2004.

The AANS places great value on its Pinnacle Partners who continue to help make it possible to produce educational meetings, courses, and related materials. The AANS has always approached interactions with corporate partners prudently and professionally, but in the light of increased regulatory demands, believe that formalizing these relationships is in the best interest of patient care and the delivery of unbiased information. This year, I appointed a task force which was headed by Jon Robertson, MD, AANS secretary, to develop AANS Guidelines for Corporate Relations. This report ensures an appropriate relationship between AANS educational offerings and our corporate sponsors. This document, which was approved by the Board of Directors last fall, is detailed in Governance in this issue of the *Bulletin* and is available in its entirety on the AANS Web site.

Tackling the Medical Liability Crisis

The medical liability crisis is one of the most serious issues facing neurosurgery. It threatens both practitioners and academicians. No issue has galvanized neurosurgery more thoroughly than this

This year a preponderance of the AANS effort has been directed toward education and educational issues.

outrageous and inappropriate assault upon physicians. The ability to counter the efforts of the powerful, well-funded trial lawyers requires a coalition of physicians. The AANS threw its full support to Doctors for Medical Liability Reform, working through Neurosurgeons to Preserve Health Care Access. The AANS has generously provided time, manpower and financial resources to this effort. A summary of the 2004 DMLR campaign and plans for 2005 are discussed in the Washington Update in this issue.

The AANS Professional Conduct Committee remains an important part of our efforts to counter unjust and inaccurate testimony. Although the committee addresses unprofessional activities of members of any kind, unfortunately the bulk of its work has to do with inappropriate testimony. Each year, this activity has grown and currently 22 cases are pending. Our committee and its structure serve as a model for an increasing number of medical associations who have instituted similar programs.

Staying in Touch

Members should know that their participation in the biennial AANS Member Survey is more than just appreciated. AANS leadership and staff decide "where to put the power on" through knowledge of how members are practicing, what they indicate they are interested in learning about, and how they rate the importance and success of various AANS activities. Although the results of the 2004 survey, which was released in the Winter 2004 *Bulletin*, indicate that, in general, members are quite satisfied with the AANS, no one intends to rest upon these laurels. Clearly, much more can be done to serve the needs of our membership.

Along the same lines, AANS members will be asked to participate in the online AANS census this year. The census will augment the member information on which the AANS can base programming decisions. Further, beginning this year and moving forward, the census will be bolstered by improvements in survey design. These improvements will enable reliable point-to-point analysis of data and will result in the AANS gaining a powerful tool for identifying trends in neurosurgery and developing programs and policies accordingly.

Spotlighting the Annual Meeting

Every spring the AANS annual meeting concludes a year of intense activity and culminates the year with a celebration of

science. This year's meeting, April 16-21 in New Orleans, exemplifies all that the AANS does for members and for neurosurgery throughout the year with its theme of Education and Innovation in Neurosurgery. The annual meeting remains the premier educational event of the neurosurgeon's year and is one of the largest meetings held. It is our most important source of clinical teaching and clinical ideas. Through our named lectures program, we have been able to enlist the skills of the world's foremost neurosurgeons and scientists who offer their knowledge of the most advanced concepts, techniques and research advances.

So this is where we have "put it on." While the AANS is proud to provide the physical infrastructure for organized neurosurgery, the AANS also remains a community of more than 7,000 real people: members and staff. It is through the efforts of many talented people that this 73rd AANS Annual Meeting is made possible, and I thank all those involved for this stellar effort. Special thanks must go, however, to Annual Meeting Chair Richard G. Fessler, MD, and Scientific Chair James T. Rutka, MD.

In New Orleans, when I hand the gavel over to AANS President-Elect Phil Wirth, MD, I will do so with the confidence that

he is taking the leadership of a thriving organization that is well-positioned for growth and innovation and meeting the challenge of the coming years. And I'll continue to wish him well. Part of the time, it will be from a stream in Montana, fly rod in hand, putting to use the bit of Norman Maclean's wisdom which I have attempted to practice this year: "Power comes not from power everywhere, but from knowing where to put it on." ■

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

Related Articles

[NREF Donors](#), page 32

[Guidelines for AANS Corporate Relations](#), page 28

[Campaign for Medical Liability Reform](#), page 38

[2005 Annual Meeting](#), page 36

NEWSLINE

News Members Trends Legislation

FROM THE HILL

MEDPAC ADDRESSES MEDICARE PAYMENT, SPECIALTY HOSPITALS

In one of two new reports to Congress, MedPAC called for increasing Medicare reimbursement to physicians by 2.7 percent in 2006 and establishing a quality incentive payment policy for Medicare-participating physicians. In the second report MedPAC urged Congress to extend the current moratorium on specialty hospitals until Jan. 1, 2007. Both reports are available at www.medpac.gov.

- **Georgia, Missouri, South Carolina Enact Medical Liability Reform** On Feb. 16 Georgia Gov. Sonny Perdue signed into law comprehensive medical liability reform legislation. The bill includes a tiered system for limiting noneconomic damages, including a \$350,000 cap in cases brought against physicians. The bill also eliminates joint and several liability, adopts a definition of frivolous claims with sanctions available for those who file frivolous suits, and tightens expert witness requirements. In addition, no doctor in an emergency setting will be held liable unless there is a finding of gross negligence. The new law includes an “I’m sorry” provision that allows healthcare providers to offer statements of apology and sympathy without the statement being used against them in court. In March, Missouri Gov. Matt Blunt and South Carolina Gov. Mark Sanford signed into law similar reform measures. The Missouri law places a limit of \$350,000 on noneconomic damages and prevents “forum shopping” by requiring lawsuits to be filed in the county where the plaintiff was first injured. The measure also allows physicians to express sympathy for an injured person without it being used against them in court. The law prevents volunteer physicians from being punished with lawsuits and grants civil immunity to physicians providing uncompensated care at government and nonprofit health clinics that provide only free services. South Carolina’s new law includes a \$350,000 cap on noneconomic damages per healthcare professional or institution. Where multiple healthcare providers or institutions are involved, a plaintiff can receive up to \$1.05 million in noneconomic damages with a single defendant not liable for more than \$350,000. The law also requires mediation before a case can be filed and requires an expert to certify that a cause of action exists by filing an affidavit at the same time the plaintiff files the Notice of Intent to Bring Suit. Finally, in emergency cases that arise in an emergency department, surgical suite or obstetric suite, the plaintiff must prove gross negligence.
- **AANS, CNS Request New Safe Harbor for Medical Malpractice Insurance Payments** On Feb. 8 the AANS and CNS submitted comments to the U.S. Department of Health and Human Services Office of Inspector General requesting that the OIG establish a new safe harbor making it permissible for hospitals to subsidize neurosurgeons’ medical malpractice premiums. Currently, such financial assistance may be illegal under the anti-kickback laws. The letter is available at www.AANS.org/legislative/OIG_Safeharbor_Comments.pdf.
- **AANS, CNS Testify at EMTALA TAG’s First Meeting** The EMTALA Technical Advisory Group held its first meeting March 30-31. The TAG, mandated by the Medicare Modernization Act of 2003, is charged with reviewing regulations and interpretive guidelines related to the Emergency Medical Treatment and Labor Act and making recommendations for appropriate changes. John A. Kusske, MD, the appointed neurosurgery representative on the TAG, was elected chair of the group’s On-Call Subcommittee. Alex B. Valadka, MD, chair of the AANS/CNS Section on Neurotrauma and Critical Care, presented organized neurosurgery’s views on the revised EMTALA regulations. The public testimony and TAG discussions focused on issues related to on-call physicians and the problems hospitals are having in fully staffing their on-call panels. Representatives from the hospital associations recommended that on-call coverage should be mandated as a condition of physicians’ participation in Medicare. The AANS-CNS comments are available at www.AANS.org/legislative/aans/EMTALA_Comments.pdf.

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

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

NEWSLINE

NewsMembersTrendsLegislation

NEURO NEWS

LARGO: PARKINSON'S PATIENTS IMPROVE

Once-daily rasagiline improves symptoms of Parkinson's disease in levodopa-treated patients with motor fluctuations is the conclusion of the Lasting effect in Adjunct therapy with Rasagiline Given Once daily study. The LARGO study was published in the March 12 issue of the journal *Lancet*.

- **IOM Calls for Spinal Cord Injury Network** In a report released April 5, the Institute of Medicine recommended that the National Institutes of Health create a spinal cord injury network to coordinate and stimulate leading-edge research on spinal cord injury. The report provides a broad overview of the current status of spinal cord injury research, examines the research and infrastructure needs, and provides recommendations for advancing and accelerating progress in translational research that will prevent the loss of function or restore function for people with spinal cord injuries. The report sets priorities for spinal cord injury research that focus on: 1) increasing knowledge of basic neurobiology and therapeutic approaches; 2) emphasizing and coordinating translational multidisciplinary research and clinical trials; and 3) strengthening the research infrastructure and enhancing training. The 15-member Committee on Spinal Cord Injury, which compiled the report, includes neurosurgeons John A. Jane Sr., MD, and Christopher B. Shields, MD. The report, titled *Spinal Cord Injury: Progress, Promise, and Priorities*, is available at www.iom.edu.
- **"Robo-Doc" Combats Intensivist Shortage; Patients Seem Pleased** A neurosurgery intensive care unit is testing RP-6, a mobile robot that allows doctors to consult with patients from a remote location. The 5-foot-6-inch tall robot that allows doctor and patient to see and hear one another in real time is being tested with neurosurgical ICU patients at the University of California Los Angeles Medical Center. The patient sees the doctor through a video screen on the robot's "head." The physician controls the robot from a computer console using a joystick to drive the robot to the patient's bedside, move the robot's head and zoom in for a close look at the patient or bedside monitors. UCLA is using RP-6 to extend the reach of intensivists. "We are able to monitor and access our patients any time from our homes and offices in a way not previously possible," stated Neil Martin, MD, chief of neurosurgery at UCLA. In a study conducted by Johns Hopkins Hospital, half of patients preferred a visit by their own doctor via RP-6 to a "real" visit by another doctor, and 80 percent of patients said that the robot increased physician accessibility.
- **Malignant Gliomas Meet Their Match: Altered Herpes Virus** A genetically modified herpes simplex virus significantly increases the survival of mice implanted with human gliomas, according to a study published in the April 1 issue of the journal *Cancer Research*. Researchers engineered a glioma-selective herpes simplex virus-1 mutant called rQNestin34.5 by expressing the ICP34.5 gene under control of a synthetic nestin promoter. The study found that 80 percent of mice treated with rQNestin34.5 within seven days of tumor implantation lived 90 days, compared with 21 days for untreated mice. Mice treated later, 19 days after transplantation, also lived significantly longer than other affected mice. "This is another step toward making oncolytic viruses more effective and safer for use in the treatment of cancer," stated E. Antonio Chiocca, MD, an author of the study and professor and chairman of neurological surgery at The Ohio State University Medical Center.
- **Timely TIA Treatment Can Prevent Stroke** Urgent treatment of transient ischemic attacks can prevent serious damage to the brain, concludes a study published in the March 8 issue of the journal *Neurology*. Researchers reviewed two population-based studies and found that of 2,516 patients who presented with ischemic stroke, 549 said they had a preceding TIA. The timing of TIA occurrence was consistent across the studies, with 17 percent on the day of the stroke, 9 percent on the previous day, and 43 percent sometime in the seven days before the stroke. The authors concluded that TIAs occur most often in the hours and days immediately preceding a stroke. Principal author Peter Rothwell, MD, stated that treatments initiated within hours of a TIA can prevent a major attack and that clinical guidelines should reflect this finding.

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

Assessing Healthcare Quality

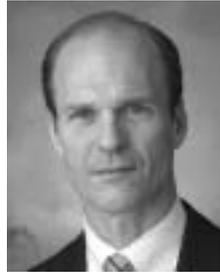
Theory, Measurement and Payment—Medicare's 2 Percent Reduction's No Idle Threat

Medicare and commercial health insurance payment to doctors and hospitals soon may be linked in part to measurable factors that are intended to indicate healthcare quality and efficiency. Where these indicators come from, how complicated and costly they are to measure, how accurately they reflect quality, and what relationship they have to the actual value of healthcare are questions yet to be answered, particularly for neurosurgeons.

The so-called pay-for-performance topic has surfaced in the turbulent sea of controversial federal medical-political issues in the form of the Medicare Payment Advisory Commission's March 2005 report recommending adoption of pay-for-performance criteria in the Medicare program. MedPAC's advice to Congress is no vague speculation and no idle threat: To pay for the initiative, MedPAC recommended withholding 2 percent from all Medicare fees and further, increasing the money diverted to quality payment over subsequent years. The withheld funds are to be redistributed to doctors in specialties that choose to participate by developing quality outcome criteria that is approved by Medicare. Doctors in specialties that do not participate would see their Medicare reimbursement reduced by 2 percent, and they would not be eligible for the "quality" payment incentives that could offset the loss. Pay for performance may be coercion, but it is likely to be future legislation, and for Medicare providers, participation isn't optional.

The pay-for-performance policy can be traced to Avedis Donabedian, a physician and pioneer in healthcare quality research, who in the 1960s published a model for quality assessment that included structure, process and outcomes. In 1973, John E. Wennberg began a series of studies, published in *Science* magazine, showing that regional variation in healthcare produced no difference in health quality or outcome, but did produce significant variation in cost and resource use. The implication was that quality can be defined, measured, and rewarded. The quality movement gained momentum in the 1980s and 1990s, becoming the subject of numerous Institute of Medicine studies. These studies are strongly influential in directing MedPAC recommendations, Congressional actions, and Medicare payment regulations that define quality criteria and reward quality performance in healthcare.

The *Bulletin's* cover story addresses quality in neurosurgical practice. It is a timely topic of importance to every neurosurgeon. In "Variations Revisited," the Health Affairs Web Exclusive of Oct. 7, 2004, editor John Iglehart wrote that "...the critical importance of creating economic incentives to reward providers who reduce unwarranted variation and the need for Medicare to assume greater leadership are increasingly recognized by payers and Congress



James R. Bean, MD

alike." This declaration is a warning, not a suggestion, to be heeded by all specialties.

Five Types of Assessment Criteria

There are five general types of criteria for assessment of healthcare outcomes. The hardest to measure is the most accurate and the least likely to be used: objective, evidence-based health benefits of treatment.

The others are less accurate, but more practical because they are measurable, such as processes of care (did physical therapy precede lumbar disc surgery?), structural measures (board certification), efficiency measures (length of hospital stay), and patient satisfaction surveys. When accuracy conflicts with practicality as in this case, practicality wins; the indirect or proxy measurements will be used, regardless of whether better health outcomes will result.

According to the MedPAC recommendations, specialties are encouraged to develop outcome criteria in four of the five categories, and to select both the conditions and the measures by which they want to be rated. Based on published evidence, the selected criteria are to relate to higher quality outcomes. The selected data sets, termed "Evidenced-Based Performance Standards for ICD-9 Classifications," would be approved through a process involving first the American Medical Association's Physician Consortium for Performance Improvement, then the National Quality Forum, and finally the Centers for Medicare and Medicaid Services.

Specialties should be cautious in selecting outcome criteria. Werner and Asch warn in the March 9 *Journal of the American Medical Association* that healthcare "report cards" can have the unintended effect of driving physicians to avoid complicated cases, conform to guidelines even if inappropriate in individual cases, and ignore patient preference and clinical judgment.

Historically, medical care was assumed to be equivalent among physicians, based on professional qualifications, and professional judgment was the standard measure of appropriateness. Quality research has disproved the first assumption, and public accountability has displaced the second. Neurosurgery is faced with a choice: either protest and oppose pay for performance because of its inaccuracy and ignore the payment penalties, or accept the initiative's inherent contradictions and develop credible performance criteria that can be used to judge the quality of neurosurgical practice. ■

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



To Care Is Human

It's Quality That Neurosurgery Must Define

Since the 1999 release of the Institute of Medicine's influential report, *To Err Is Human*, a number of initiatives intended to reduce errors and improve quality of care have percolated through the medical community. This increased emphasis on the formalization of quality and accountability processes was brought to the attention of specialists in March 2000, when the American Board of Medical Specialties voted to transition recertification programs to maintenance of certification programs.

Neurosurgeons turned their attention to these processes in 2002 when their certifying board, the American Board of Neurological Surgery, announced its own plan for implementing MOC. The ABNS has continued to develop its program, honing its methods for defining competency in the four MOC components—professional standing, lifelong learning, cognitive experience, and practice performance—and in January 2006 the ABNS will begin tracking continuing medical education credit for neurosurgeons certified in 1999 and thereafter.

While the MOC program was evolving, a trend toward linking quality initiatives to physician payment—the proverbial carrot rather than stick—was gaining momentum. Some of these so-called pay-for-performance, or P4P, programs have borrowed from well-known business models, such as the Six Sigma data-driven methodology for quantifying quality and the International Organization for Standardization guidelines for development of technical standards. In November 2000 a consortium of Fortune 500 companies and other health benefits providers known as The Leapfrog Group launched operations with a mission of improving safety, quality and affordability of healthcare through incentives and rewards. The group rates hospitals based on quality and safety practices and posts results, which are available to the public, on its Web site; in addition, consortium members agree to follow the group's "purchasing principles." According to Leapfrog estimates, more than half the U.S. population was in a Leapfrog region in 2004, and implementation of the group's first three recommended quality and safety measures could save \$50 billion annually.

The P4P issue heated up for physicians in February 2005 when the Centers for Medicare and Medicaid announced the Physician

Group Practice Demonstration, a three-year P4P program for 10 large physician practices. The CMS cited evidence of reduced healthcare cost in the private sector, in addition to better quality, as incentives for the program's development. Then the March 2005 report to Congress by the Medicare Payment Advisory Commission put P4P on the front burner for physicians by including specialists like neurosurgeons in the P4P mix. If Congress accepts MedPAC's recommendations, neurosurgeons who participate in Medicare could become P4P participants as early as January 2006. Also in March:

- the American Medical Association released P4P principles and guidelines designed to help physicians determine whether a program is fair and ethical;
- the Medical Group Management Association issued a statement in support of MedPAC's recommendation, albeit with some reservations; and
- the American Medical Group Association launched its own P4P initiative, which involves a steering committee of healthcare leaders—among them Uwe Reinhardt, PhD, and John Wennberg, MD—whose mandate it is to "totally overhaul the process of reimbursement by linking it directly to attainment of quality performance and outcome measures."

Why should neurosurgeons care? Given the recent convergence of the pay-for-performance and maintenance of certification initiatives, it seems that neurosurgery has a rather large stake in successful development of meaningful quality measures. What these measures will be is the burning question which two authors will explore in the following pages. Other authors delve into the P4P topic, providing historical, legislative, and management perspectives that elucidate its pitfalls and possibilities for neurosurgery.

Characterizing Quality

The Opportunity of Outcomes Research

By Robert E. Harbaugh, MD

Quality assurance for neurosurgical care in the United States is based primarily on the rigors of the neurosurgical certification process. Physicians who desire a career in neurosurgery pursue specialty training designed to credential them for certification by the American Board of Neurological Surgery. Over the last few years the ABNS has been working on ways to document maintenance of competence and quality in neurosurgical care. The ABNS Maintenance of Certification program, which has a July 2005 start date, is intended to assure a sustained high quality of neurosurgical practice once a candidate moves from the environment of a supervised residency program to the relatively unmonitored environment of independent neurosurgical practice. One of the ways being considered for documenting competence in the neurosurgical practice area is evaluation of operative outcomes.

The need to develop meaningful measures for quality performance has taken on new importance with the emergence of pay-for-performance initiatives, which increasingly have been adopted by private payers in the past few years, and now by Medicare, which is currently piloting pay-for-performance programs for 10 large medical groups. With the specter of government-mandated quality measures looming, neurosurgeons look to organized neurosurgery to develop meaningful methods for measuring quality.

This article presents a brief review of the concepts of quality assurance and assessment as they are applied in the healthcare system of the United States. A paradigm for evaluating and improving neurosurgical quality is proposed, with the expectation that these quality measures could serve as measures required for documenting MOC and pay-for-performance requirements.

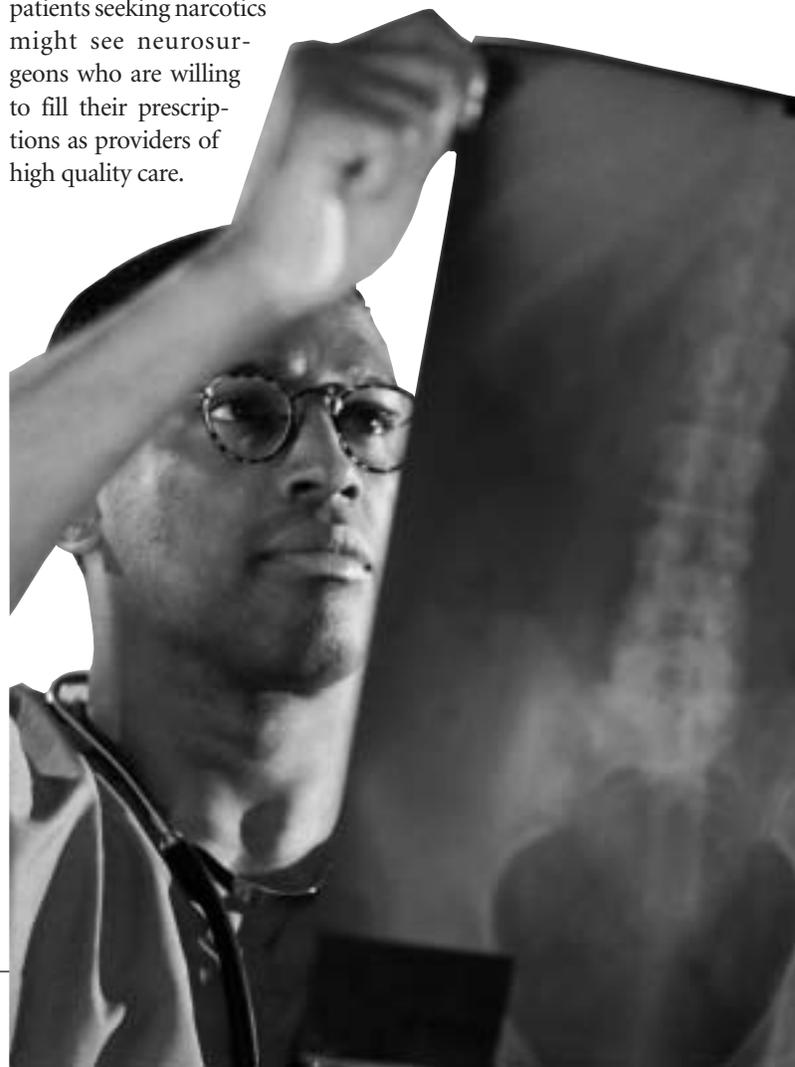
Defining Quality

For quality to be measured or assured, a generally agreed-upon definition of the term must exist. Healthcare quality is a social construct that includes the somewhat nebulous concept of “health” in a given society and also involves the various perspectives of those healthcare system participants who are defining the term.

Healthcare quality is usually defined in terms of benefits to patients, with high quality care defined as care that best maintains and improves patients’ health and satisfaction. Healthcare policy analyst Mark Chassin has provided a simple but compelling defini-

tion of quality in healthcare as “care that meets or exceeds the expectations of the patient and the society.” The Institute of Medicine has defined quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.”

Patients define quality in terms of responsiveness to their expectations and needs. However, patient expectations may be unrealistic. For example, medical advances reported in the mass media may inflate patient expectations to unachievable levels. In addition, patient needs might be contrary to what physicians would call good health. For instance, patients seeking narcotics might see neurosurgeons who are willing to fill their prescriptions as providers of high quality care.



Employers, who frequently purchase healthcare insurance for their employees, are primarily concerned with the efficiency of care as a measure of quality. For them, quality care is low-cost care.

Physicians believe that professional judgment should be the authoritative criterion for determining the quality of care, and neurosurgical quality assurance in the United States is based on this premise.

Measuring Quality

The evaluation of quality medical care usually is based on three factors: structure, process and outcome. These components vary depending on whether one is evaluating quality at the practitioner level, the healthcare institution level, the individual patient level or the population level. Structure and process measures of quality have been used predominantly because they are easier to assess than outcome. For instance, it is easier to determine whether or not an institution has a committee for review of morbidity and mortality or if a patient received preoperative antibiotics than it is to determine the patient's risk-adjusted outcome.

However, quality assessment by either process or outcomes evaluation alone is intrinsically unreliable. For process evaluation to be a valid measure of quality, it is necessary to document a causal relationship between adherence to the process and improved health outcomes. For example, one must show that regular morbidity and mortality conferences result in progressively fewer complications. Proving such a connection can be difficult. Conversely, for outcomes evaluation to be a valid measure of quality, it is necessary to link the outcome measured to a process or processes that can be modified to improve that outcome. As an example, assessing the functional outcomes of patients with ischemic stroke is a valid quality measure if improving the processes involved in early diagnosis and treatment can result in decreased morbidity.

A Paradigm for Quality Assurance in Neurosurgery

Quality assurance is an attempt to oversee individual and organizational responsibility for access to and enjoyment of health. Mark Chassin developed a paradigm for assessing quality that categorizes quality problems into overuse, underuse and misuse of healthcare interventions. This paradigm has heuristic value and can be readily applied to neurosurgical practice.

Overuse of neurosurgical intervention occurs when the risk of harm from providing a neurosurgical service exceeds the potential

benefit. A number of factors may lead to overuse of neurosurgical procedures. These include an inadequate knowledge base, unclear indications for treatment, reimbursement for service, enthusiasm for the procedures that can be performed, and expectations of patients and referring physicians that "something" needs to be done.

Underuse of neurosurgical intervention occurs when the neurosurgeon fails to provide a service that would likely have produced a favorable outcome. Factors leading to underuse include an inadequate knowledge base and unclear indications. Capitated payment plans encourage underuse of services as do financial barriers to care such as lack of insurance coverage.

Misuse of neurosurgical care is defined as the occurrence of avoidable complications from appropriately applied neurosurgical interventions. As for overuse and underuse, an inadequate knowledge base may be responsible for misuse of neurosurgical services. Inadequate surgical training or inadequate surgical skill also can lead to this kind of quality problem. It must be noted that misuse problems are often system-wide problems and not the fault of an individual practitioner.

The evaluation of quality medical care usually is based on three factors: structure, process and outcome.

Outcomes Data Can Improve Neurosurgical Care

This paradigm fosters analysis of how the quality of neurosurgical care could be improved. For example, the one causative factor common to overuse, underuse and misuse is an inadequate physician knowledge base. Considering the explosion of relevant clinical data over the last 50 years and the steadily increasing pace of change, it is impossible for physicians in the

21st century to practice the highest quality of medicine based solely on the information carried in their heads. It is, therefore, important to evaluate what and how neurosurgeons are taught. Numerous organizations are active in assuring the quality of education for neurosurgical residents and practitioners. Teaching skills for gathering and critically evaluating information pertinent to a specific clinical setting must be emphasized. Further, neurosurgeons must be convinced of the importance of continuously monitoring the outcomes of care.

The idea that outcomes research can improve the quality of care is not new, and in fact there is evidence to support a causal relationship. However, the Northern New England Cardiovascular Disease Study Group has demonstrated that meticulous tracking of outcomes data in a nonpunitive environment can result in decreasing misuse, overuse and underuse problems. Neurosurgery might benefit from a similar system.

Continued on page 16

CHARACTERIZING QUALITY

Continued from page 15

Several years ago the Outcomes Committee of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons developed the infrastructure necessary to conduct national and international outcomes studies in neurological surgery. Committee members from each of the clinical sections of the AANS and the CNS were recruited to ensure representation of clinical expertise in all areas of neurosurgery. The committee included neurosurgeons and non-neurosurgical consultants with expertise in clinical epidemiology and information technology.

A reliable and secure, Internet-based neurosurgical outcomes reporting system was deployed. This system allowed neurosurgeons to download outcomes reporting instruments to their personal computers, submit data electronically to a centralized database, obtain feedback about their outcomes and compare outcomes indicators in their practice to the same indicators in the universal dataset. Data submitted to the central database did not have patient or surgeon identifiers, thus assuring patient and physician confidentiality. Data verification and monitoring could be accomplished, however, by use of the user name and password key, housed at the AANS Executive Office.

This system was convenient and available at no charge to all members of the AANS and the CNS. Even so, almost no one used it. At the time, the neurosurgical community did not perceive enough benefit in this system to justify the modest amount of time required to collect and submit data.

The Time Is Right

The infrastructure exists, and now, with the advent of ABNS Maintenance of Certification and pay for performance, perhaps the time is right to revisit neurosurgical outcomes research. One option would be for each ABNS-certified neurosurgeon to continuously submit outcomes data on one procedure that he or she performs frequently. This would immediately result in the ability to monitor and improve the quality of neurosurgical care. 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. This system would allow the kind of meticulous practice monitoring that results in improved patient care and reduced costs with a minimum investment of time and effort on the part of the neurosurgeon.

Those unfamiliar with this type of Internet-based data collection may think it would be an onerous, time-consuming process. However, I have been collecting data for a number of years on a procedure I perform frequently, carotid endarterectomy, using a personal database. I consult this data frequently and use it in consultations with my patients and for quality improvement efforts. The data are extremely useful and it takes only a few minutes per patient to record. My own positive personal

experience with recording and using outcomes data explains why I have long championed the development of an outcomes reporting system that offers a menu of procedural outcomes studies for all of neurosurgery.

Such a system would generate data that could be used as a very valuable research 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 for randomized clinical trials and to determine best clinical practices.

There is great opportunity for improving neurosurgical outcomes through development and utilization of a system for outcomes research. Quality improvement in neurosurgery needs to come from within the specialty rather than being imposed by government agencies or third party payers. Autonomous, private sector oversight organizations like the ABNS are composed of intelligent and dedicated individuals who have a deep personal interest in assuring the quality of neurosurgical care. No external agent could match the insight and dedication of this group. The ABNS already has developed an Internet-based data collection system called NeuroLog for ABNS resident case log accumulation and is anticipating utilizing the tool for the Maintenance of Certification process, as well. Given the added impetus for quality measurement tools needed for pay-for-performance initiatives, it seems that now is the right time to implement an outcomes system that will truly benefit our patients.

Robert E. Harbaugh, MD, FACS, FAHA, is the associate editor of the *Bulletin*. He is professor and chair of the Department of Neurosurgery, Penn State University College of Medicine, Penn State Hershey Medical Center, Hershey, Pa.

FOR MORE INFORMATION

Chassin MR. "Improving the Quality of Care." *New England Journal of Medicine*. 1996; 335: 891-894.

Chassin MR. "Is Health Care Ready for Six Sigma Quality?" *The Milbank Quarterly*. 1998; 76: 565-589.

Donabedian A. "Criteria, Norms and Standards of Quality: What Do They Mean?" *American Journal of Public Health*. 1981; 71: 409-412.

Harbaugh RE. "Quality Assurance in Neurosurgery: United States Concepts." *Acta Neurochirurgica. Supplementum*. 2001; 78: 53-58.

O'Connor GT, Plume SK Wennberg JE. "Regional Organization for Outcomes Research." *Annals of the New York Academy of Sciences*. 1993; 703: 44-50.

Practice Guidelines—Why Bother?

IOM, MedPAC and Others Call for Evidence-Based Quality Care

MARK E. LINSKEY, MD

Practice guidelines for neurosurgery originally were developed as an academic tool for reducing the practice variation which existed across geographic regions and among institutions. Some neurosurgeons perceived practice guidelines as useful tools for establishing uniform care in rapidly evolving specialty areas, such as neurotrauma and neurocritical care, in which expensive technology and invasive monitoring procedures are used. Others were wary of “cookbook medicine” and feared compromise of physician autonomy.

Practice guidelines arose from evidence-based medicine, the need for which was formalized by the Institute of Medicine in two influential and widely publicized reports, *To Err Is Human* in 1999, and *Crossing the Quality Chasm* in 2001. In the latter report, four of the thirteen recommendations—specifically recommendations 4, 7, 8, and 10—focused on amassing evidence of best-practice treatments and procedures and assessing their efficacy. In March of this year, the Medicare Payment Advisory Commission told Congress that Medicare reimbursement should be linked to quality measures, hastening the need for development of such quality measures should the recommendation be accepted. It would not be surprising if in the next few years neurosurgeons are required to explain care that deviates from accepted clinical guidelines in order to receive full reimbursement.

For many reasons, the onus is on neurosurgery to develop clinical practice guidelines as anchors for best practice benchmarking. The healthcare system hasn't the time, the expertise, or the funds to produce specialty-specific clinical practice parameter guidelines on its own. Payers are likely to adopt and sanction guidelines generated by professional organizations whenever they are available, and the guidelines endorsed likely will be disease centered rather than procedure or specialty focused. Without participation of neurosurgeons in the development of pertinent guidelines, neurosurgeons might be held to clinical practice parameters produced by other societies that have overlapping clinical interests.

Establishing Guidelines for Guidelines

In general, there are three main methods of guidelines development: informal consensus, formal consensus, and evidence-linked development. Only the latter meets the standards for evidence-based medicine. Indeed, the IOM hopes to eventually restrict the use of the term “guideline” to systematically developed advisory statements created according to validated methodology. Without strict adherence to systematic and validated methodology, the guidelines produced may represent pooled ignorance rather than distilled wisdom.

Construction of guidelines involves, first, a systematic means of identifying evidence and ranking the relative strengths, or quality of each study as evidence, and second, achieving panel agreement on a strength of recommendation linked to the analysis of the strength of evidence for each intervention in question. Both steps are

critically important and have their own drawbacks and limitations.

The ultimate validity of any guideline is related to three key factors: 1) the composition of the guideline panel and its process; 2) the identification and synthesis of the evidence, and 3) method of guideline construction applied.

The panel composition is crucial, both for ultimate acceptance of the guidelines by practicing physicians and for its critical influence on the recommendation step of guideline construction. Panels that over-represent certain disciplines or exclude other key disciplines or dissenting voices may be seen as less credible. Successful introduction of a guideline requires that all key disciplines contribute to its development to ensure ownership and support.

Panelists' recommendations can differ even when analyzing the same data. In general, studies of guidelines development have suggested that U.S. experts tend to be more action oriented than those from the United Kingdom; surgeons tend to be more certain about surgery than nonsurgeons; and generalists tend to be more conservative than specialists. Guidelines produced by advocacy groups and subspecialty societies tend to be most problematic and suspect due to problems with unbalanced panel representation as well as methodological concerns. Recommendations made by specialists sometimes are more influenced by the specialty to which they belong rather than by the scientific evidence. Further, a 1999 study by Shaneyfelt and colleagues reviewed the methodological quality of guidelines produced by scientific societies and found that even basic methodological principles often are overlooked.

Ultimately, the quality and effectiveness of guidelines depends at least as much on the quality of the consensus development involved in deciding the strength of recommendation (the second step of guidelines construction), as on the quality of the evidence base. Strength of recommendations is a complex topic that implies value judgments on top of methodological assessments of evidence. It should incorporate subjective considerations such as patient- or setting-specific applicability, and also balance risks, benefits and costs.

Given the new significance of evidence-based medicine in the current healthcare climate, further exploration of how to develop reasonable and valid neurosurgical clinical guidelines that cover as many areas of neurosurgery practice as possible is both important and desirable. ■

Mark E. Linskey, MD, is associate professor and chair of the Department of Neurological Surgery at UCI Medical Center, Orange, Calif.

FOR MORE INFORMATION

Institute of Medicine, www.iom.edu

Shaneyfelt TM, Mayo-Smith MF, Rothwangl J. “Are Guidelines Following Guidelines? The Methodological Quality of Clinical Practice Guidelines in the Peer-Reviewed Medical Literature.” *Journal of the American Medical Association*. 1999; 281(20):1950-1951.

P4P for Specialists Gains Velocity

Whether They Improve Quality or Not, P4P Programs Are Coming

MICHELLE BERTAGNA AND RICHARD GLIKLICH, MD

Pay-for-performance programs aim to motivate quality improvement by rewarding providers for delivering high-quality care. With the increasing interest in healthcare quality improvement, these programs endeavor to align financial incentives with quality improvement goals, thereby overlaying the fee-for-service structure of healthcare with a system that rewards the best providers. While P4P programs currently focus on primary care physicians and hospitals, recent trends indicate that these initiatives will expand to include specialists within the next few years.

Although P4P has existed in various forms for years, its recent popularity in healthcare can be traced to several highly publicized reports criticizing quality of care in the American medical system. The Institute of Medicine published two of the most influential reports, *To Err is Human* and *Crossing the Quality Chasm*, in 1999 and 2001, respectively. These reports focused on significant quality and patient safety failures in the healthcare system, emphasizing the financial costs of high rates of medical errors. The 2001 report, a key recommendation of which was the alignment of payment policies with quality improvement, sparked the current interest in P4P programs.

In response to these reports, health plan sponsors, employers, and more recently the Centers for Medicare and Medicaid Services, have turned to P4P as a way to improve quality of care and increase member satisfaction by ensuring that they are paying for the best possible care. P4P initiatives have rapidly proliferated as a result, with nearly 33 percent growth in 2004 alone. P4P programs now include 35 million health plan members and beneficiaries, representing over 30 percent of all present HMO membership. Commercial health plans are sponsoring the majority of the approximately 84 P4P programs, although the CMS, with five P4P programs as of December 2004, is becoming increasingly active in this area.

The swift growth of P4P over the past four years, combined with the lack of historical data to support best practices, has led to widespread variation in plan design. Despite the many differences, nearly all P4P programs consist of the same four structural components: performance measures, data collection methods, performance targets, and financial incentives. Most sponsors base their performance measures on widely accepted clinical practice guidelines and measures, such as the evaluation process known as the Health Plan Employer Data and Information Set, known as HEDIS. To collect data for performance measurements, P4P sponsors often use a combination of self-reported data and claims data to determine provider performance. Programs increasingly are emphasizing the importance of self-reported data, with some initiatives even offering bonuses for providers who invest in information technology.

Once P4P sponsors have developed measures and collected data, they set performance targets that participants must meet in order to qualify for the financial incentive. Most P4P programs use performance targets that are comparative between practices (competitive),

rather than fixed (noncompetitive). Finally, P4P programs reward providers who meet performance targets with financial incentives. Financial incentives can account for as much as 20 percent of a provider's income, but most programs offer limited incentives that

Programs must gain provider support by closely collaborating with physicians during the initial development stages.

range from 1 percent to 5 percent of a provider's income.

In designing the four components of a P4P program, sponsors face many barriers to implementation and adoption. For P4P to be successful, these programs must effectively change provider behavior by aligning financial incentives with quality improvement goals. The greatest challenges for sponsors are developing large-scale programs that have the leverage to effect change in provider behaviors and obtaining sufficient funding to implement and administer these programs. P4P programs also must define clear, broadly accepted performance measures in order to gain physician support. The programs must overcome technology infrastructure obstacles to data collection, often by enabling physicians to invest in technology so that their programs can use self-reported data rather than claims data. Most importantly, the programs must gain provider support by closely collaborating with physicians during the initial development stages.

P4P sponsors have managed to overcome many of these obstacles when creating programs for primary care physicians, who are included in 94 percent of current initiatives. P4P sponsors now are beginning to include specialists in their programs. According to the recent Med-Vantage study, some 42 percent of P4P programs now involve specialists. The programs target a range of specialists, including gastroenterologists, orthopedic surgeons, gynecologists, and cardiologists. Neurosurgeons have not commonly been involved in P4P programs, but a pattern of

including high-volume specialists in them clearly is emerging.

The move toward including specialists in P4P programs can be viewed as one step in the development of the P4P movement as a whole. P4P programs are expanding through a three-stage development process, with most programs still in the first stage. In this initial phase, programs examine the performance of primary care physicians using measures based on the HEDIS measures. P4P programs move into the second stage of development when they expand their performance measures and financial incentives to include specialists and begin publicly reporting quality data. In the third stage of P4P development, programs offer a fully developed program that examines performance for primary care physicians and specialists, releases comprehensive report cards to the public, and uses information technology to improve quality through e-prescribing, patient registries, and automated reminders. While few, if any, P4P programs are in the third stage, many are moving from the first stage to the second stage. Within the next three to four years, it is likely that most P4P programs will reach the second stage and begin including specialists.

Several P4P programs have recently moved into the second stage of development. In early 2005, Horizon extended its P4P program to specialists by sending out report cards to approximately 600 gas-

P4P programs, as they continue to expand, will move beyond the primary care physician to include specialists.

troenterologists and obstetrician-gynecologists. While Horizon has not yet tied these report cards to financial incentives, it has warned providers that in the future the reports will be the basis of the reimbursement structure for many specialists. As an addition to its existing P4P program, Aetna launched specialist quality initiatives in Seattle, Jacksonville, and Dallas in 2004. Blue Cross and Blue Shield of Massachusetts began including specialists in its P4P programs in 2003, while Blue Cross and Blue Shield of Minnesota expanded its program to cover specialists in 2004.

As P4P programs expand to include specialists, sponsors likely will try to build on their experiences with primary care physicians,

for whom sponsors were able to build on generally accepted HEDIS measures and clinical practice guidelines. There are far fewer guidelines for specialty fields such as neurosurgery, and many specialists resist creating broad guidelines, pointing out that clinical decision-making is not straight-forward in complex specialty fields. Specialists also maintain that measuring quality in a field such as surgery is far more subjective and complicated than measuring the use of standard procedures, such as immunizations, by primary care physicians. To expand P4P programs to specialists, program sponsors will need to work closely with specialists to develop measures that will be broadly accepted.

P4P may move into specialty fields more rapidly if programs can follow the lead of the CMS. As a result of the Medicare Modernization Act of 2003, the CMS has initiated several new demonstration projects that measure physician performance and offer financial incentives to those who improve quality and efficiency. These programs aim to encourage physicians to adhere to best practice guidelines and adopt information technology, and they measure performance with process and clinical measures. While these programs currently focus on primary care physicians, it is likely that the CMS will soon begin to include specialists, particularly if the early data from these projects is positive. Certainly, in its March 2005 report to Congress, the Medicare Payment Advisory Commission recommended that Medicare moves toward basing a portion of payment to providers on their quality of performance.

Although P4P programs have rapidly grown in size and scope over the past several years, there is still little empirical evidence to support the claims that these programs can improve quality of care while reducing overall costs. Despite the lack of evidence, enthusiasm for P4P is unlikely to diminish soon, given the widespread interest in improving quality of care, the amount of funds currently devoted to these initiatives, and the expanding role of the federal government in supporting the movement. P4P programs, as they continue to expand, will move beyond the primary care physician to include specialists.

For P4P programs to include specialists successfully, the sponsors must work with specialty groups and physicians to develop clinical measures and guidelines that will be widely accepted. These guidelines and measures are the critical piece of including neurosurgeons and other specialists in P4P, and it is likely that more attention will be devoted to developing and publicizing such guidelines and measures in the near future. In anticipation, neurosurgery might consider a proactive approach to developing its own standard measures and obtaining early experience ahead of the CMS or payer-driven programs. ■

Michelle Bertagna is project manager, and **Richard Gliklich, MD**, is president of Outcome, www.outcome.com, a provider of post-approval strategies and solutions including pay-for-performance programs. Dr. Gliklich is author of the book *Profiting From Quality: Outcomes Strategies for Medical Practice*.

Congress Considers P4P Legislation

January 2006 Implementation Would Affect Neurosurgeons

BARBARA E. PECK, JD

Based on the recommendations of the Medicare Payment Advisory Commission early this year, Congress and the Centers for Medicare and Medicaid Services are considering a pay-for-performance program for Medicare that could be implemented for all physicians, including neurosurgeons, as soon as January 2006.

According to the “budget neutral” scheme suggested by MedPAC, payment for all physician services would be reduced between 1 percent and 2 percent in 2006, and physicians would have the opportunity to earn that money back if they meet certain quality measures. MedPAC anticipates that each year more and more money would be allocated through the P4P system until eventually between 20 percent and 30 percent of physician reimbursement is determined by P4P. Reductions made to fund P4P would be in addition to the cuts already required under the current sustainable growth rate payment formula: Physicians are facing reimbursement cuts of approximately 5 percent each year from 2006 through 2013 unless Congress or the administration takes action to prevent these reductions.



Quality or Cost?

Under a P4P program, evidence-based quality measures are developed and physicians are paid according to how well they perform in relation to these measures. There are a variety of measurement types that can be used and they vary in sophistication. Physicians who meet the quality measures receive bonus payments; those who do not, receive reduced payments.

The current push to implement P4P in Medicare is coming from private insurers, who believe their own programs will not be successful until Medicare is on board; big business; consumer groups; and several physician organizations, including the American College of Physicians. All of these groups hope P4P will improve quality and reduce overall healthcare costs. There is no evidence, however, that the P4P programs do either of these things.

There are several P4P models in place, and Congress and the CMS are hoping to use these past experiences as a springboard for implementing P4P within Medicare for all physicians on Jan. 1, 2006. For example, many private insurers have attempted to implement P4P programs involving the management of chronic illnesses in the primary care setting; in February, the CMS announced a 10-site demonstration project. Several programs also have been set up for cardiac surgery, and the American College of Surgeons has

begun working on specific criteria that may be applicable to surgeons. The CMS also set up a P4P program for hospitals last year.

Legislative Prospects

On Capitol Hill, legislators are in the process of holding hearings on P4P to determine the possibility of implementing MedPAC’s recommendations. Neurosurgery has participated in these hearings through the Alliance of Specialty Medicine. Publicly, several legislators have stated they will not address the Medicare physician payment cuts that will take place between 2006 and 2013 unless physicians first agree to implement a P4P program. On the other side, many physician groups, including neurosurgery, state they cannot even consider a P4P program until the cuts are eliminated, the Medicare physician reimbursement system is stabilized, and quality measures are developed and pilot-tested for each specialty.

Congress and the CMS are hoping to use past experiences as a springboard for implementing P4P within Medicare for all physicians on Jan. 1, 2006.

Many physician groups also believe that:

- meaningful measures for all specialties cannot be developed by Jan. 1, 2006;
- P4P is not desirable for all specialties;
- money should not be taken from all doctors to pay for any P4P programs; and
- Medicare cannot base a P4P program on claims-based data.

In addition, one of the measures most likely to be first implemented is the use of electronic medical records, and many feel this is another unfunded mandate that will have a disproportionate affect on small specialties and doctors in small practices.

While P4P appears to have broad Congressional support, it is too soon to tell exactly how this debate will unfold. Policymakers are still sorting out all the different approaches to P4P and how best to begin implementing such a system, including whether or not the system will be budget neutral as MedPAC recommended, and/or in the context of overall sustainable growth rate formula reform. Furthermore, Congress is currently considering a wide variety of budget cuts, including reductions in Medicare spending.

Clearly, organized medicine faces significant challenges in

ensuring a rational, nonpunitive payment system that rewards quality in a cost-effective manner. The American Association of Neurological Surgeons and the Congress of Neurological Surgeons will continue to lobby on this issue and will keep neurosurgeons informed throughout the year. At some point in the coming months, it is likely that AANS and CNS members will be asked to engage in grassroots activism on these issues. ■

Barbara E. Peck, JD, is a senior Washington associate in the AANS/CNS Washington office.

The P4P Initiative: How NERVES Can Help

A Practice Administrator Argues for Neurosurgery's Involvement

MARK MASON

Once again it seems that payers, led by Medicare, are on the verge of striking out in a new direction to compensate physicians and facilities for the services they provide through various pay-for-performance initiatives. What will P4P mean for the business of neurosurgery?

One can take either a pessimistic or optimistic approach in answering that question. The pessimists will claim that P4P is just the latest scheme payers have devised to increase their profits on the backs of providers. How will "quality" be determined? What appeal processes will be in place? How will fixed costs be covered under a quality pay system? These and a thousand other questions will haunt the pessimist's mind. Gloom and doom will be the order of the day.

Is there a realistic, optimistic approach to P4P that is not simply Pollyannaish? There is, and neurosurgery is in the perfect position to embrace this latest shift and make it work to its advantage.

First, the technology that allows the capture of data needed to demonstrate and prove quality must be embraced. NERVES, the Neurosurgery Executive's Resource, Value and Education Society, has begun that process by developing the exclusive Neurosurgery Practice Annual Survey, which was conducted last fall. While the neurosurgical community's enthusiastic participation in the survey was encouraging, there is a long way to go before neurosurgery can effectively compete with the payer community on the amount and accuracy of the data available. As the move toward basing reimbursement on quality measures advances, all neurosurgeons and their practice administrators should be highly motivated to assure that their work is appropriately compensated. Participation in the survey process will no longer be an option; it will be an essential tool.

Second, serious efforts toward collaboration and cooperation in finding common approaches to patient care are necessary. Physi-

cians are trained to be independent and decisive. That training can lead to an environment where posturing and position become more important than practical solutions. A genuine openness to alternative approaches will enable neurosurgeons to thrive under a P4P approach. Cooperation and collaboration will be required for physician interactions not only with one another but also with facilities. Physicians and hospitals will need to find new ways to align incentives. A genuine effort to develop systems and approaches to patient care that enhance quality and control cost will be essential. A recognition that sound business approaches will benefit all providers, physicians and facilities, will enable resources to be effectively and efficiently utilized.

Lastly, it is essential that the neurosurgical community is involved in learning about the P4P approach to reimbursement and in designing the matrixes that will be used to determine quality measures. To that end, NERVES is devoting its spring educational meeting to this topic. Alice Gosfield, an attorney and recognized expert in the area, is the keynote speaker at the April 15-16 NERVES meeting in New Orleans, immediately before the 2005 AANS Annual Meeting. In addition, the Council of State Neurosurgical Societies is preparing to focus on the topic during a fall educational meeting. All of organized neurosurgery will need to focus on providing every practicing neurosurgeon with the tools needed to win in the P4P world.

Every challenge provides opportunities. While the P4P initiatives could be viewed as yet another threat, neurosurgery alternatively can choose to accept the challenge and take advantage of the new opportunities it presents. ■

Mark Mason is president of NERVES, www.nervesadmin.org, and practice administrator at Neurological Surgeons PC in Nashville, Tenn.

Five-Year Review for Medicare Fee Schedule

Neuros Surveyed May–August Will Determine Work RVUs

This year marks the third five-year review update of the Medicare fee schedule for physicians. The work relative value units for a large number of procedural codes, and therefore subsequent physician payment for those procedures, is predominantly determined by results of the Relative Value Update Committee survey, which will be given to physicians in May for completion by early August. Therefore, it is critical for the physicians who receive surveys to complete them in an accurate and timely manner.

This Coding Corner reviews the survey process in the interest of helping neurosurgeons understand the critical importance of completing surveys as well as the methods involved in the survey process itself.

Congress mandated that physician work values should be examined and challenged by individuals, medical specialty societies, or the Centers for Medicare and Medicaid Services no less than once every five years. The last major update to the neurosurgical physician work values occurred in 1995 under the leadership of Robert Florin, MD. Although the resource-based relative value system was originally developed by Drs. Hsiao and Braun more than 25 years ago, the American Medical Association's RUC is responsible for maintenance and updates of the physician work relative value units.

For this year's update process, the American Association of Neurological Surgeons and the Congress of Neurological Surgeons, the American Society of Anesthesiologists, the American Association of Pain Management, a consortium of primary care specialties, and the CMS itself, will submit recommendations to the RUC. The primary method for making physician work recommendations is the RUC survey process. The multispecialty physician members of the RUC critically analyze the survey results in the context of similar physician services with established work values in order to make recommendations to the CMS concerning the physician work value. Typically, the CMS accepts 95 percent of the RUC recommendations. Consequently, survey results largely determine the physician work relative value units in the Medicare fee schedule.

Survey Overview

Although the survey at first appears to be onerous and complicated, the actual components are fairly easy to understand and complete. It is important to keep in mind that most of the physician work values are driven by the amount of time the physician performs various components of the service as well as by the level and complexity of the postoperative follow-up during the global



Gregory J. Przybylski, MD

period, which is typically 90 days for most major surgical procedures.

The survey begins with a request to identify a reference procedure from a list of procedures. Based on a process termed magnitude estimation, most physicians can reliably compare one procedure with another and determine whether the work entailed is more, less or similar to the reference procedure. The relative value of the chosen reference procedure becomes the value to which the various physician work components of the surveyed procedure are compared. The remainder of the survey examines the preoperative, intraoperative, and postoperative components of a procedure.

Preoperative Period In the preoperative period (before skin incision), several physician activities are performed. A preoperative history and physical is required for admission to the hospital. It should be included in the work of the procedure if it is typically performed the day before or the day of the procedure and not separately billed. The physician is asked to estimate the time spent with the patient in the holding area reviewing the planned procedure, reviewing the documentation including radiographic and laboratory studies and consultant recommendations, obtaining or reaffirming the surgical consent form, and answering any questions from the patient, family, anesthesiologist, or surgical team. Additional time components before the skin incision is made include changing into surgical scrub attire, washing hands, waiting for anesthesia induction, positioning and prepping the patient, and affirming availability of the required equipment for the procedure. In the interest of completing the survey accurately, it may be helpful to actually keep track of the time required in these phases for a typical patient.

Intraoperative Period The intraoperative component describes the "skin-to-skin" time needed to complete the procedure for the "typical patient." The vignette at the beginning of the survey summarizes a description of the typical patient and the primary components of the procedure. Rather than thinking of the overall time of the fastest case or most difficult case, the physician is asked to estimate the average time that is required to complete the procedure. Unfortunately, surgeons in particular frequently underestimate the actual time required to perform a procedure. Operative logs can be helpful in identifying the average time required.

Postoperative Period Upon closure of the skin, the postoperative period commences. The physician estimates the time in the immediate postoperative period required to return the patient to

Survey results largely determine the physician work relative value units in the Medicare fee schedule.

a gurney, complete postoperative orders, dictate an operative note, speak with the family, and bring the patient to the recovery room. The duration of a subsequent visit later in the day to check on the patient should be estimated as well, even for same day procedures in which discharge instructions are given. If the patient remains in the hospital, the duration and type of service for each day the typical patient is expected to remain in the hospital is

estimated. If critical care services typically are provided by the physician, these codes should be identified. Otherwise, the hospital care codes reflecting the duration of the service are used. A discharge day management code is chosen that reflects the time needed to provide instructions to the patient and family on the day of discharge. Lastly, during the postoperative global period, the physician estimates the number of office visits during which the patient will be seen and the level of evaluation and management service provided. Since these are established patients, the 9921x series of codes are used. The survey instrument provides these codes with estimates of the time required to perform a level one through level five service. The physician's time estimate is used to choose the appropriate level of code.

The survey also asks for an estimation of the intensity and complexity of the surveyed procedure when compared with the reference procedure. Although the actual work value is not determined from these measures, the RUC uses these numbers to judge whether the reference procedure is more or less work than the surveyed procedure. At the end of the survey, the physician is asked to estimate the work RVU for the surveyed procedure.

Given the three months allowed for survey completion, it can be useful for the physician to obtain data from operative logs as well as measure the times of various components during their day to day practice in order to provide the most accurate data. Timely and accurate completion of the survey cannot be overemphasized. ■

Gregory J. Przybylski, MD, is professor and director of neurosurgery at JFK Medical Center in Edison, N.J. He is a member of the AANS/CNS Coding and Reimbursement Committee and on the faculty for AANS coding and reimbursement courses. He also is council director of socioeconomic affairs for the North American Spine Society and program chair of its coding update courses.

Related Articles

Florin RE. "Five-Year Review of the Medicare Fee Schedule Underway," AANS *Bulletin* Summer 1995. www.AANS.org, Article ID 10122.

Przybylski GJ. "Estimating a Physician's Work," AANS *Bulletin* Fall 2000. www.AANS.org, Article ID 10185.

Patient Transfers Spark Town-Gown Tension

AMC Directors See Pros and Cons for Training Programs, Patients

Midnight. Just before I'm fully overtaken by sleep, the phone jars me awake. The call, from "Upstate ER," concerns a patient whom the emergency physician wants to send to my academic medical center.

Ms. D, who many years ago had multiple neurosurgical procedures for a pituitary tumor, and a bone flap infection following one of the procedures, complains of a headache (like the ones she often has). I'm told that her computed tomographic scan shows a small collection of fluid in her frontal lobe that looks old, but "infection cannot be fully ruled-out." Further, one of her previous surgeons has retired and the other says he "can't" continue to care for the patient. In a most sympathetic tone I ask the ER physician if the on-call neurosurgeons have been called. "They wouldn't want me to call them for this patient," I'm told. I suggest that it would be better to call them and have them speak directly to me if they really feel Ms. D requires the specialized care available only at my AMC. I'm returning to sleep when I'm jangled awake again. This time it's the emergency room of my AMC calling about Ms. D. Upstate ER did contact an on-call neurosurgeon who said Ms. D's problem couldn't be handled there and that she would have to be sent to my AMC's emergency room.

In another case, young and otherwise healthy Ms. H suffers a rapid-onset severe headache, nausea, and dizziness, followed by some lower back pain. She is admitted to "Upstate Hospital" where she has an extensive evaluation in the medicine, neurology and neurosurgery departments. The pertinent findings are diffuse dural enhancement intracranially and some enhancement along the cauda equina. A biopsy of the dura and brain is recommended to her when all noninvasive studies are negative. At a family member's suggestion, she transfers her care to my AMC where she is evaluated and diagnosed with a clear case of intracranial hypotension. She is successfully treated and released, without ever undergoing a biopsy, and she returns to work.

These two cases illustrate the tension between "town and gown" neurosurgeons, that is, between community and academic neurosurgeons. Clearly, some patients like Ms. D do not suffer from neurosurgical problems which strictly require the expertise of AMCs. In contrast, patients such as Ms. H definitely benefit from the added experience and multidisciplinary approach available at AMCs. In addition, resident training certainly benefits more from cases like Ms. H's, though traditionally much of basic



resident training has been completed on patients such as Ms. D. Where is the balance? What are the factors that have changed the neurosurgical landscape and is the change permanent? Do we need to consider creative solutions for the future?

While I do not have easy answers to these questions, a dialogue that addresses them is crucial to the future viability of neurosurgical education. To that end, I have asked chairs of two AMC neurosurgical departments to comment on the impact of transfers to AMCs. Commentary by William T. Couldwell, MD, at the University of Utah opens the dialogue, while insights from T.C. Origitano, MD, of Loyola University Health System in Chicago will continue it in the next issue of the *AANS Bulletin*.

Resident Education Among the Benefits of Patient Transfers to AMCs

William T. Couldwell, MD

An increase of transfers from community neurosurgeons and hospitals to AMCs is a trend that has become evident over the last few years. The reasons for this trend are multifold, and include a reduced number of neurosurgeons in community practice, high medical liability risk for treating high-risk neurosurgical problems, and a rise in unfunded or underfunded patients. The net effect of this trend is an overall increase in the number of patients with complex neurosurgical disorders cared for at AMCs.

This consolidation of care for difficult or complex cases produces many benefits. First, it increases the depth and breadth of cases for resident training. The 80-hour workweek for residents has reduced the potential total exposure of cases per resident dur-

ing training, making the case mix more critical. The concentration of the most complex cases can somewhat counteract the work hour reduction by enhancing the intensity of the resident training experience. Second, many of the patients transferred can benefit from the interdisciplinary management that is available only at AMCs. For example, patients with aneurysmal subarachnoid hemorrhage can receive optimal, state-of-the-art management because of the availability of both endovascular management (such as coiling the aneurysm or treating vasospasm) and open neurosurgical management. For some patients, multidisciplinary teams such as a tumor board may assist with provision of complementary, rather than alternative, services. In all of these examples, patients benefit from transfer of their care to an AMC.

There is a considerable recent literature that suggests that the outcomes for patients with complex cranial and spinal neurosurgical problems directly correlate with the volume of cases by providers and hospitals. The additional benefit of families' satisfaction at higher volume centers also has been reported. This probably reflects availability of complex services as well as important support services, such as support groups for patients with

severe spinal cord injury (and their families) or dieticians who help pediatric patients undergoing chemotherapy. The increasing volume of patients with tertiary disease transferred to AMCs ultimately will lead to multidisciplinary and subspecialized care that likely will produce better outcomes for these patients and greater satisfaction for their families.

Neurosurgical residents benefit not only from seeing the greater depth and breadth of cases but also from being exposed to an optimal, multidisciplinary approach. The future of neurosurgical care will likely have more, not less, multispecialty interaction. Learning how to work cooperatively as a member of such a team is an important component of resident education.

Overall, without significant medicolegal reform I see market forces in the United States continuing to consolidate tertiary neurosurgical care to AMCs, with positive consequences for resident training, and negative consequences for the fiscal survival of AMCs. ■

Deborah L. Benzil, MD, is associate professor in the Department of Neurosurgery at New York College of Medicine, Valhalla, N.Y. **William T. Couldwell, MD, PhD**, is chair of the Department of Neurosurgery at the University of Utah in Salt Lake City.

The Legal System v. Today's Doctor

FLPs Are One Way to Protect Personal Assets

How big is the lawsuit industry today? It is \$233 billion—roughly twice the size of the gross domestic product of Ireland. How much of that sum relates to medical liability suits? The figure is \$25 billion, or slightly more than the GDP of Luxembourg.

Through medical liability premiums, neurosurgeons as a group are one of the biggest per capita contributors to this litigious behemoth, with median premiums exceeding \$72,000 in 2002 and some individuals paying more than \$300,000 for liability coverage. Despite the high cost of insurance, there is no guarantee that liability coverage will pay the entire cost of lawsuits. When judgments top policy payout caps or fall within policy exclusions, personal assets are vulnerable to seizure.

For this reason, state medical societies in Illinois and Missouri have pushed for legislative measures that protect doctors' personal assets from being used to pay judgments. Unfortunately, the "lawyer lobby" killed the proposals in both states. Fortunately, however, asset protection attorneys have been altering long-established tax tools to include asset protection powers along with tax benefits. These entities can be used in all 50 states to safeguard assets of lawsuit-prone professionals.

Some asset protection measures will save doctors' assets while others will not. It is important to understand the differences, as well as the fact that a highly sophisticated asset protection plan can often discourage attorneys from filing lawsuits in the first place.

While the following principles do not constitute legal advice, they do give information on which to base a sound lawsuit protection strategy.

PRINCIPLE 1: Preparing for Lawsuits Is Better Than Reacting to Them

Some doctors have the false impression that they can transfer personal property out of their names if they are sued—a tactic that legal precedent deems a "fraudulent conveyance." If an accident occurs on the operating table, it is already too late to rearrange the ownership of your home. *Timing* is the key to whether courts uphold personal asset protection measures taken by doctors. If the purpose of the action is to defraud creditors, it is fraudulent. Ironically, though, courts often rule that the same asset protection procedures taken by professionals *before* a potential lawsuit occurs not only are legal but also smart and strategic, especially when combined with tax legal tools.

Therefore, structuring personal assets to withstand lawsuits is an excellent dose of preventive legal medicine.

PRINCIPLE 2: Divide or Be Conquered

A neurosurgeon's assets owned in his or her name can be used to satisfy one malpractice judgment. Such assets might include, for example, a home, brokerage accounts or medical clinics. But if all these assets are owned in limited partnerships, they cannot be seized.

For instance, a home can be owned by one entity, a brokerage account can be owned by another entity and so forth. When done with sound legal planning, this can be a major step toward complete asset protection and tax planning for neurosurgeons and their families.

Principle 3: Use Research, Not Hearsay

Have you ever heard the advice, "Just put the house in your spouse's name," or "Just own everything in your trust"? These statements represent amateur and potentially dangerous legal advice.

For instance, transferring the ownership of assets to another's name also transfers complete legal control to that party. Disaffected family members could then commandeer those assets. In a divorce, for example, the medical professional might then have a very difficult (and awkward) time recovering his or her due portion. Worse yet, if an angry ex-spouse became vindictive enough, assets could simply disappear completely. Despite the almost over-

For Further Information

- U.S. Tort Costs: 2003 Updates. Trends and Findings on the Costs of the U.S. Tort System.
www.towersperrin.com/tillinghast/publications/reports/2003_Tort_Costs_Update/Tort_Costs_Trends_2003_Update.pdf.
- Neurosurgery in a State of Crisis: Report on the State of Professional Liability Insurance Rates and the Impact on Neurosurgeons and Their Patients.
www.neuros2preservcare.orgpdfs/csnsurveyreport092502.pdf.

whelming drawbacks to owning property in the name of one's spouse, ill-informed lawyers continue to give this advice to their physician and surgeon clients.

Today there is a new generation of domestic tax reduction entities, newly retooled to protect against a variety of claims—most importantly those that result from lawsuits. One of the best examples of these entities is the newly revamped family limited partnership.

Principle 4: Use Family Limited Partnerships

The FLP has been a tax-planning tool since 1916 when Congress first created it. With the volume of case law now substantiating this entity, FLPs have emerged as a tremendously powerful choice for lawsuit-prone doctors to own homes and other assets while reducing taxes at the same time.

FLPs are structured somewhat like a family business with a general partner, usually the doctor, who controls all the assets and income distribution of the partnership. The limited partners, possibly the surgeon's spouse and children, receive income distributed as determined by the general partner. Limited partners make no management decisions within FLPs.

Normally in lawsuit proceedings, if a lawsuit is filed against a doctor and the plaintiff wins, the judge would issue a "turnover order" in which non-exempt property, including the surgeon's home, stocks, bonds and bank accounts, could be turned over to the plaintiff. However, if all of the doctor's property is held within carefully drafted asset protection FLPs, the law in all 50 states prohibits any of that property from being seized, turned over, or sold.

In fact, the terms of a carefully drafted FLP only give plaintiffs one remedy to collect on their judgment—namely, the "charging order." This means that the plaintiff's only right is to receive distributions from the FLP, which are made at the sole discretion of the general partner. In other words, doctors have the power to elect not to distribute income to the plaintiffs.

Further, because of IRS Revenue Ruling 77-137, the plaintiff who obtains a charging order against an FLP is required to pay taxes on this "phantom income," which is the income of the FLP, even though the plaintiff does not receive any income at all. The result for the plaintiff is a tax bill with no income and no assets from the defendant.

There is a difference between a "plain vanilla" FLP drafted for tax reduction purposes and an FLP drafted for lawsuit protection. Asset protection attorneys have developed advanced lawsuit protection and tax reduction FLPs containing as many as 50 unique clauses *not* found in most FLPs.

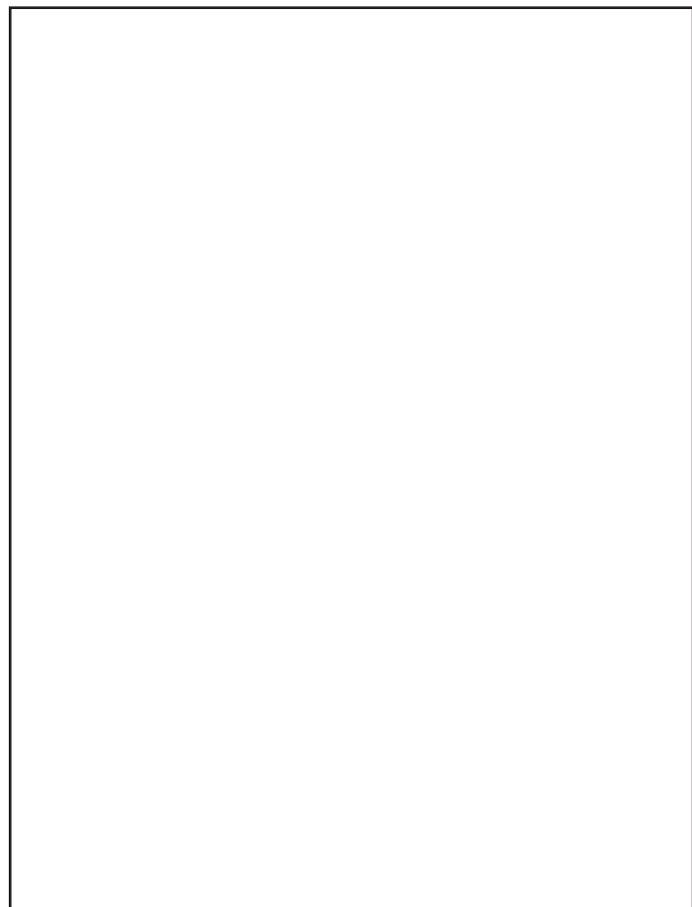
For instance, most FLPs include weak language surrounding the right of general partners to control distributions from those who sue the partnership. Asset protection FLPs guard against this possibility by strengthening the language with the following

clause: "The general partners may, at their discretion, distribute the profits and/or capital of the partnership business 'pro rata' or 'non pro rata' as they deem advisable." In other words, general partners may legally withhold their income distributions from plaintiffs or whomever else they please.

In conclusion, neurosurgeons and other professionals have increasingly secure options through which to protect their personal assets from lawsuits. By structuring their savings and valuable property into asset protection legal tools, they can be protected by extensive legal precedent and, in the process, actually discourage lawyers from filing suits.

Trial lawyers are very skilled at winning judgments, but asset protection keeps them from collecting those judgments out of doctors' pockets. A savvy asset protection plan such as an FLP offers neurosurgeons a way to use the legal system and not be abused by it. ■

Robert K. Dowd, JD, LL.M., has served as a senior trial attorney for the Internal Revenue Service and as a medical malpractice plaintiff attorney. He is a speaker for the National Medical Foundation for Asset Protection, www.nationalmedicalfoundation.org, a for-profit firm that teaches medical groups lawsuit protection and tax planning principles.



A Compass for AANS–Industry Interactions

The AANS Adopts Guidelines for Corporate Relations

After several months in development, new guidelines intended to foster appropriate and ethical behavior of AANS representatives with corporate partners were adopted by the American Association of Neurological Surgeons.

The AANS Guidelines for Corporate Relations, adopted in November 2004, outlines parameters for interactions between AANS representatives and its corporate partners. The document specifically addresses conduct related to meetings, educational courses, special events, exhibits, marketing and advertising, the NREF, publications and Web sites.

The guidelines, however, are not intended to govern individual relationships that AANS members have with corporations or any relationships they may have through their practices or institutions.

The rapid development of the AANS' multidimensional corporate outreach program propelled the need for comprehensive protocols that address all types of relationships between the AANS and corporations. AANS leadership recognized the benefit of industry's financial support of AANS activities such as annual meetings, fellowships, educational grants and awards. At the same time the leadership wished to address ethical concerns related to such financial support while supporting a balanced, long-term relationship with corporate sponsors.

The AANS Guidelines for Corporate Relations was drafted by a task force appointed in spring 2004 by Robert A. Ratcheson, MD, 2004-2005 AANS president. The task force, led by Jon H. Robertson, MD, included representatives of AANS leadership who were very familiar with AANS' involvement with corporation sponsorship: Steven L. Giannotta, MD; Charles J. Hodge Jr., MD; L. N. Hopkins, MD; Paul C. McCormick, MD; and James T. Rutka, MD.

Before preparing the guidelines, the task force reviewed a number of pertinent policy and procedural documents currently in existence, including documents recently adopted by associations of pharmaceutical and device industries. The Pharmaceutical Research and Manufacturers Association, known as PhRMA, operates under a set of principles governing relationships between its member companies and medical professionals, and for conducting clinical trials and communicating results. The Advanced Medical Technology Association, or AdvaMed, has guidelines for ethical interactions with healthcare professionals.

The task force also reviewed the Standards for Commercial Support, which was updated and adopted by the Accreditation Council for Continuing Medical Education in September 2004. This document focuses on ensuring independence concerning continuing medical education activities and highlights in some

detail issues related to conflicts of interest, disclosure and written policies regarding honoraria.

With the research phase complete, the task force set out to draft a document that was concise, thorough, and easy to navigate.

The task force recognized the relationship between neurosurgery and industry as a shared mission which would continue to exist only if the public and individual patients benefited. Two strict rules were established for all AANS educational programs associated with corporate sponsorship:

- To ensure the integrity of the educational process, it was decided that the AANS must have complete control of site selection, development of educational content, selection of faculty, implementation and assessment of all educational programs.
- In exchange for financial support, corporate sponsors must not influence or alter any educational event.

The final version of the AANS Guidelines for Corporate Relations was reviewed and approved by the AANS Board of Directors in November 2004. Members of the task force and the board are confident that these guidelines not only will enable the AANS to better understand its internal position regarding sponsorship and corporate support, but also will allow the AANS to explore progressive, less traditional opportunities with existing and potential corporate partners. Because every situation cannot be foreseen, the document was designed to function as a compass, helping to guide members and corporations in their interactions while keeping the AANS mission in sight.

The guidelines complement ethics safeguards already in place in several AANS areas. For example, those submitting abstracts for AANS meetings or journals disclose financial interests or other relationships that might have bearing on their research. Meeting exhibitors must agree that display and demonstration of their products and services is for the advancement of the art and science of neurosurgery. Beginning in 2004, the AANS Board of Directors, committee members, course faculty, and AANS managers sign disclosure statements to ensure that the decisions and actions of AANS representatives are not unduly influenced by any special interests of individual members or employees.

The AANS Guidelines for Corporate Relations was provided to all companies exhibiting at the 2005 Annual Meeting in New Orleans. The document is available in its entirety at www.AANS.org/corporate/guidelines.asp. ■

Jon H. Robertson, MD, is the AANS secretary and chair of the AANS Development Committee. He is professor and chair of the University of Tennessee-Memphis Department of Neurosurgery.

Outcomes, Certification and Reimbursement

NeuroLog Looms Large in the Future of Neurosurgical Residents

For neurosurgeons currently in training, certification by the American Board of Neurological Surgery may be only a dot on the horizon while they attempt to survive the trials of residency. While they may have heard of outcomes evaluation, they probably have not yet participated in it. However, outcomes evaluation and how it presently relates to a neurosurgeon's certification and reimbursement have become critically important issues which deserve attention during residency.

Neurosurgeons are certified by the ABNS after they pass a written examination during residency; then they must pass an oral examination taken after being licensed to practice and accumulating one year of practice data for board review. The ABNS also requires neurosurgeons certified in 1999 and after to be recertified every 10 years through its Maintenance of Certification program.

The MOC program has several components, among them submission of key cases and a surgical case log that is identical to the case log submitted for the oral examination. To help neurosurgeons prepare for their initial certification as well as for MOC, the ABNS developed NeuroLog, a database accessed through the Internet. Designed for practice assessment, NeuroLog standardized the submission format for case data and outcomes evaluation by utilizing Current Procedural Terminology codes.

NeuroLog also tracks residents' case participation for individual evaluation, and it can be used to develop summaries for neurosurgical program directors and provide the Residency Review Committee with accreditation statistics. NeuroLog represents a significant development in database management and outcomes assessment for all neurosurgeons. It also represents an extension of traditional outcomes assessment via internal review conferences.

Such conferences address morbidity and mortality and foster discussion of difficult cases and suboptimal outcomes. Conference participants can benefit from the variety of perspectives and turn all-too-human mistakes to the benefit of future patients. Now, as the outcomes review process is quantified, the ramifications extend beyond training and improved patient care to reimbursement for physician services.

Pay-for-performance programs are the newest trend in health-care administration. Some programs quantify subjective variables such as patient satisfaction, return-to-work times, and willingness to adopt new techniques, and offer financial incentives for physicians who meet the criteria. For example, an article in the February 2005 issue of *Physicians Practice* reported that Blue Cross expected to pay a \$3,500 bonus to an "average-performing" physi-

cian, and up to \$12,000 to its "highest performing" physicians.

Advocates of P4P programs believe that they encourage physicians to perform their best and allow patients and insurers to identify the safest and most successful doctors. For most neurosurgeons the basic idea of being rewarded for a job well done is probably appealing. However, three main concerns spring to mind.

■ *First, will P4P programs discourage physicians from performing complex procedures or treating the sickest patients?* Since patients who have had multiple operations and complicated surgeries are considered more likely than others to sustain complications and stay in the hospital longer, it seems likely that physicians treating them would be "rewarded" with poorer performance ratings and lower reimbursement. If the P4P initiatives penalize physicians who treat difficult cases, would these programs incentivize physicians to refer out all but the simplest of cases? Under such a system, who would treat the basilar apex aneurysms, the failed cervical or lumbar fusions, or the traumatic injuries?

■ *Second, who will have access to outcomes data?* Because they directly result from patient safety and quality of care concerns, P4P programs are intended to improve patient outcomes, a goal all neurosurgeons share. However, the physician performance data in the public domain and could have a detrimental effect on medicine. For example, political or legal entities might use the data to set a local "standard of care" which may or may not be related to standards determined by medical professionals.

■ *Third, will P4P be an excuse for some payers to reduce reimbursement?* Medicare is the most influential payer to announce a P4P initiative because Medicare's reimbursement rates are the benchmark used by other insurance providers. For example, an insurer may reimburse at 110 percent of the Medicare rate and another, at 85 percent. If private payers parallel Medicare in lowering reimbursement but do not also adopt a performance bonus, physician reimbursement would decrease.

The ABNS developed NeuroLog to assist residents with transition to board certification and outcomes assessment over the course of their careers. NeuroLog, an excellent tool for providing data and insight that can help a neurosurgeon improve care for patients, is a work in progress which will evolve as the need for specific outcomes data is clarified. The benefits of P4P initiatives are less certain, but neurosurgeons can expect to feel the impact of P4P programs as early as 2006. ■

Brian R. Subach, MD, FACS, is a neurosurgeon at The Virginia Spine Institute, Reston, Va.

NEWS.ORG

AANS/CNS Sections Committees Associations Societies

AANS Members Deceased in 2004

William R. Adey, MD
Eben Alexander Jr., MD
Harvey Chenault, MD
James W. Correll, MD
John P. Dennis, MD
Lyle A. French, MD
Leslie E. Geiger, MD
Sidney Goldring, MD
Mitchell R. Gropper, MD
Sam Hanzel, MD
John C. Kennady, MD
John P. Laurent, MD
William M. Loughheed, MD
John J. Lowrey, MD
Kiyoshi Matsumoto, MD
Robin L. Mitchell, MD
Dogan M. Perese, MD
Hal Watson Pittman, MD
J. Lawrence Pool, MD
John R. Russell, MD
V. S. Shankar, MD
Leonard A. Titrud, MD, PhD
Erich S. Wisiol, MD

AANS Expands Functionality of Online CME Tracking The addition of state requirements and the functionality that allows a member's delegate to track continuing medical education credits are two new enhancements of the CME tracking system at www.MyAANS.org. When members access this password-protected Web site and enter the CME tracking area, they now can select the states in which they hold a license to practice medicine, and the specific details of relicensure for those states will appear. A percentage meter shows each member's progress toward meeting those requirements. Members have the option of entering their state licensure number. When a transcript is printed, it already will have the member's personal number on it for submission with a renewal. Members also can assign or remove security access for a delegate who can access and manage their password-protected records. The delegate will be able to access CME records, make online dues payments, complete speakers requests, and access the AANS Online Membership Directory. Additional information is available at www.MyAANS.org or from AANS Member Services, (847) 378-0500.

AANS Invites 2005 Participation in Online Census The online census at MyAANS.org is an important tool for collecting crucial data about neurosurgery. The census originally was designed to help the AANS pool data used to tailor programs that meet members' individual needs and to solicit educational funding from corporate partners. Recent improvements in survey design will enable reliable comparative data analysis from year to year, yielding a powerful tool for identifying trends in neurosurgery and developing programs and policies accordingly. In addition, new data fields have been added, including more subspecialty options; new options for practice type and practice setting intended to help members better describe their practice environment; and new affiliations for U.S. military service, including area of service, role or position, service dates, drilling units and duty stations. The census can be completed at any time at www.MyAANS.org.

New AANS Patient Education Brochure: Spinal Fusion *A Patient's Guide to Spinal Fusion* is the newest

brochure in the AANS Patient Education Brochure Series. This brochure discusses when spinal fusion techniques might be used to treat low back pain. It also describes spinal fusion procedures in detail, addressing both bone grafts and use of hardware. Other topics in the brochure series are general concepts in neurosurgery, hydrocephalus, low back pain, neck pain, carpal tunnel syndrome, diagnostic testing, and brain tumors. A complete description is available online at www.AANS.org.

Neurosurgical Focus Calls for Papers *Neurosurgical Focus*, the online, indexed, rapid-publication journal of the AANS, announces new topics and deadlines for upcoming issues: July 2005 (May 15 deadline) Endoscopic Techniques in Skull Base Surgery; August 2005 (June 15 deadline) Skull Base Approaches to Diseases Involving the Posterior Fossa. Continuing medical education credit is available for all current issues. More information is available at www.AANS.org.

JCAHO Calls for Medical Liability Reform On Feb. 10, the Joint Commission on Accreditation of Healthcare Organizations, or JCAHO, called for reform of the nation's medical liability system in a white paper titled *Healthcare at the Crossroads: Strategies for Improving the Medical Liability System and Preventing Patient Injury*. Among its 19 recommendations, the JCAHO calls for intensified attention to patient safety and medical injury prevention by healthcare providers and practitioners; emphasizes the critical importance of open communication between patients and practitioners; and urges the creation of an injury compensation system that is patient-centered and serves the common good. The white paper acknowledges that caps on noneconomic damages have been effective in managing increases in liability insurance premiums, but also states that capping damages "does not address all of the factors that lead to litigation on the front end." The report says expert witnesses should be court-appointed and calls for changes to the National Practitioner Data Bank. The white paper is available at www.jcaho.org. ■

TIMELINE: Neurosurgery Through History

If Outcomes Oversight Then, A Different World Now?

The emerging discipline of outcomes analysis has spawned an industry and a literature of its own. It is deemed an invaluable tool to assess the value of new medications, management practices, and technologies.

The dawn of modern neurosurgery in the late 19th century is recorded in the form characteristic of the time—mostly sporadic case reports announcing the successful localization of an intracranial lesion.

Case reports predominated for the first several decades of neurosurgery, although in 1893 the Glaswegian pioneer Sir William Macewen published his classic book, *Pyogenic Diseases of the Brain and Spinal Cord*. He summarized the results of his surgical series, using survival as his

“endpoint” and percentage as his statistical analysis. Of 25 patients with brain abscesses, 18 of the 19 who had surgery survived while all of the nonsurgical patients died. With Scottish understatement Macewen wrote, “One might conclude that in uncomplicated abscesses of the brain, operated on at a fairly early period, recovery ought to be the rule.”

Some 12 years later, when Harvey Cushing began to operate on patients with “tumors of the nervus acusticus,” the published experience of this surgery reported a mortality rate of about 80 percent. Four of his first 11 patients died shortly after surgery. Had Cushing stopped there, discouraged, the results likewise would have spoken for themselves. But no internal review board or outcomes panel stepped in, and by 1917 he reported that mortality

after acoustic neuroma surgery had dropped to 11 percent.

The drama of those early days is long past and will be hard to match. Most neurosurgical discoveries and refinements today yield incremental improvements in patient survival or function—or not. Modern outcomes analysis may be necessary to parse out these important but small changes. But it gives one pause to consider that if today’s standards had been applied to neurosurgery’s pioneers, the neurosurgical specialty might never have come into being. It is unlikely that many of the *Bulletin’s* readers believe the world would be better off for that. ■

Michael Schulder, MD, is associate professor in the Department of Neurological Surgery and director of image-guided neurosurgery at UMDNJ-New Jersey Medical School.

LETTERS

Editor:

I read with interest your Winter 2004 issue on emergency neurosurgical coverage [RE: The ER—Who Is Answering Call?]. I have been involved with colleagues from across the country with trauma issues. For some of us, these issues found resolution to the benefit of us all. For others, the lack of resolution led to bitter in-fights and hardships.

In trying to understand why it is that neurosurgery faces much difficulty with the trauma system, and notwithstanding the disproportionate burden we face as compared to other specialty colleagues, these conclusions come to mind. Most importantly, there is lack of knowledge from our surgical and medical colleagues regarding neurological pathologies. For instance, a con-

versation with normal CT scan of the head does not need to be seen by a neurosurgeon at midnight. In addition, I find that most trouble in covering trauma comes from surgeons who are themselves uncomfortable or unhappy taking care of the trauma patient. In general, surgeons who direct trauma care are more qualified as general surgeons than trauma specialists.

In my opinion, we are dealing not with a neurosurgical shortage or failure as much as with a trauma system failure that translates into blame and scapegoating between specialists. If medical students and residents are more exposed to neurosurgery during their training years, they can acquire better neurosurgical education, be more comfortable and have

more confidence dealing with their neurosurgical colleagues to the benefit of patients and the trauma system.

*C.G. Salame, MD, MS
Norwich, Ct.*

MORE LETTERS?

Send your comments regarding ER coverage, stipends or other issues in neurosurgery to the editor via digital mail at bulletin@AANS.org, or regular mail, AANS, 5550 Meadowbrook Drive, Rolling Meadows, IL 60008. Letters are assumed to be for publication unless otherwise specified. Correspondence selected for publication may be edited for length, style and clarity.

Creating Masters in Neurosurgery

NREF Supporters July 1-Dec. 31, 2004

The Executive Council of the AANS Neurosurgery Research and Education Foundation gratefully acknowledges the individuals, groups, corporations and the general public who generously supported the NREF between July 1 and Dec. 31, 2004.

We thank these donors for continuing to recognize the critical need for funding many of the most promising neurosurgical studies being conducted today. These studies, which enhance science and improve patient care, have set a high standard for the neuroscientific community.

These NREF supporters' investments in the future of the neurosciences will reap positive rewards—new advances in the areas of brain tumors, stroke, epilepsy, and disorders of the spine. Ultimately, the outcomes of these funded research projects will likely translate to medical breakthroughs and saved lives.

The AANS members, general public and corporations supporting NREF in the last six months of 2004 include:

Gifts of \$15,000 to \$25,000

Kyphon, Inc.
Benjamin B. Lecompte III, MD
Medtronic Neurological

Gifts of \$5,000 to \$14,999

Hans C. Coester, MD, FACS

Gifts of \$2,500 to \$4,999

Dr. & Mrs. Julian T. Hoff
John A. Jane Sr., MD, PhD
Marc A. Letellier, MD
Dr. & Mrs. Herbert M. Oestreich
Catherine A. Ruebenacker-Mazzola

Gifts of \$1,000 to \$2,499

Dr. & Mrs. Bizhan Aarabi
Christopher J. Abood, MD
E. Francois Aldrich, MD
Jaime A. Alvarez, MD
Ronald I. Apfelbaum, MD
James R. Bean, MD
Deborah L. Benzil, MD
Charles H. Bill II, MD, PhD
Kim J. Burchiel, MD, FACS
John R. Caruso, MD, FACS
Lawrence S. Chin, MD, FACS
Dr. & Mrs. William T. Couldwell
Frank Culicchia, MD
Willard Emch, MD
Allan H. Freidman, MD, FACS
Dr. & Mrs. Allan L. Gardner
John G. Golfinos, MD
Julius M. Goodman, MD

Dr. & Mrs. M. Sean Grady
Dr. & Mrs. Robert G. Grossman
Dr. & Mrs. Robert L. Grubb Jr.
Regis W. Haid Jr., MD
Robert E. Harbaugh, MD, FACS
Dr. & Mrs. Samuel J. Hassenbusch
Patrick J. Kelly, MD
Joseph T. King Jr., MD
Myron B. Kratzer
Richard S. Kyle, MD
Michael H. Lavyne, MD
Paul C. McCormick, MD
Dr. & Mrs. Daniel L. McKinney
Carole A. Miller, MD
K. Krishna Murthy, MD
Hiroshi Nakagawa, MD
Dr. & Mrs. George A. Ojemann
Dr. & Mrs. Frank T. Padberg
Dr. & Mrs. Nettleton S. Payne
George Powell
Stefan G. Pribil, MD
Dr. & Mrs. Donald O. Quest
Robert A. Ratcheson, MD
Richard B. Raynor, MD
Stuart G. Rice, MD
Drs. Keith & Margaret Rich
Dr. & Mrs. David W. Roberts
Richard L. Rovit, MD
Raymond Sawaya, MD
John F. Schuhmacher, MD, FACS
Dr. & Mrs. P. Robert Schwetschenau
Edward L. Seljeskog, MD, PhD
Warren R. Selman, MD
Michael B. Shannon, MD

J. Marc Simard, MD, PhD
Volker K. H. Sonntag, MD
Gary K. Steinberg, MD, PhD
Philip E. Stieg, MD, PhD
Jeffrey J. Thramann, MD
Troy M. Tippet, MD
Dr. & Mrs. Clarence B. Watridge
Martin H. Weiss, MD, FACS
Dr. & Mrs. Joel W. Winer

Gifts of \$500 to \$999

Jose F. Alvarez-Dib, MD
Thomas E. Carter, MD, FACS
John A. Duncan III, MD, PhD
Dr. & Mrs. Stewart B. Dunsker
Dr. & Mrs. Joel A. Feigenbaum
Mark A. Fulton, MD
Franz E. Glasauer, MD
Dr. & Mrs. M. Peter Heilbrun
Umeo Ito, MD
Keller Kaufman-Fox
Ranjit Kumar Laha, MD
Robert Levinthal, MD
Dr. & Mrs. Dean C. Lohse
Agnes M. Marshall-Walker, RN
Dr. & Mrs. Robert G. Ojemann
Russell M. Pelton, MD
A. John Popp, MD & Margaret M. Vosburgh
Elisabeth M. Post, MD
John F. Raggio, MD
Kenneth J. Richland, MD
Michael Schulner, MD
Scott A. Shapiro, MD
William W. S. So, MD
Robert F. Spetzler, MD
John E. Stevenson, MD
Russell L. Travis, MD
Dennis A. Turner, MD
Dr. & Mrs. Kevin A. Walter

Gifts of \$250 to \$499

R. E. Balch, MD
James Earl Boggan, MD
Dr. & Mrs. Robert J. Dempsey
Henry Feuer, MD
Donald H. Frank, MD
Victor T. Freund, MD
Howard M. Gardner, MD
Abdi S. Ghodsi, MD
Hamilton C. Goulart, MD
Dr. & Mrs. Michael D. Heafner
Thomas A. Marshall
William J. Meyer, MD
Seigo Nagao, MD
William G. Obana, MD
Mick J. Perez-Cruet, MD
William L. Pritchard, MD

Stephen C. Saris, MD
Randall W. Smith, MD
Richard C. Strauss, MD
Larry D. Tice, MD
Hani J. Tuffaha, MD
William C. Welch, MD

Gifts of \$100 to \$249

Hatem S. Abdo, MD
Moustapha Abou-Samra
Maged Lotfy Abu-Assal, MD
Laurie Lynn Ackerman, MD
James R. Adametz, MD
Robert Adams, MD
David E. Adler, MD
Joseph Aferzon, MD
Cynthia Zane Africk, MD, FACS
Alfonso Aldama-Luebbert, MD
Todd D. Alexander, MD
Brent T. Alford, MD
Julio Aljure, MD
David W. Allen, MD, PC
Marshall B. Allen Jr., MD
Rafael Allende, MD
Lisa Maire Ambrogio, PAC
Sepideh Amin-Hanjani, MD
Thomas S. Anderson, MD
Nobuo Aoki, MD
Alan J. Appley, MD, FACS
Hajime Arai, MD
Roberto J. Aranibar, MD
Rex E. Arendall II, MD
Gustavo J. Arriola, MD
John A. Artz
Sam Assam, MD
Ramesh P. Babu, MD
Robert J. Backer, MD
Behnam Badie, MD, FACS
Saeed Bajwa, MD
Frank D. Barranco, MD
Jay M. Barrash, MD, FACS
Janet W. Bay, MD
BBDO Detroit
Thomas A. Becherer, MD
Mohamed Y. I. Beck, MD
Roberto B. Bellegarrigue, MD, FACS
Vallo Benjamin, MD
Thomas A. Bergman, MD
Clark B. Bernard, MD
Robert J. Bernardi, MD
Bethel Ame Zion Church
Mark H. Bilsky, MD
David Bird
Stephen E. Boodin, MD
John Brayton, MD, FACS
Peter R. Bronec, MD
William H. Brooks, MD
Michael Brown, MD

NREF DONORS

Lewis J. Brown, MD
 Jeffrey N. Bruce, MD, FACS
 Michael James Burke, MD, FACS
 George T. Burson, MD
 Robert C. Buza, MD
 Richard W. Byrne, MD
 Arnold B. Calica, MD, PhD
 Paul Joseph Camarata, MD
 Dr. & Mrs. Louis P. Caragine Jr.
 Carolyn Marie Carey, MD, FACS
 Benjamin Carson, MD
 L. Philip Carter, MD
 David A. Cech, MD, FACS
 Luis A. Cervantes, MD, FACS
 R. Cem Cezayirli, MD, FACS
 Fady T. Charbel, MD
 Dr. & Mrs. Michael R. Chicoine
 Sin H. Choo, MD
 Ray M. Chu, MD
 Jonathan S. Citow, MD, FACS
 W. Craig Clark, MD, PhD
 Richard E. Clatterbuck, MD, PhD
 Elizabeth B. Claus, MD, PhD
 Cully A. Cobb III, MD
 Charles S. Cobbs, MD
 Traian T. Cojocaru, MD
 Edward V. Colapinto, MD
 Maurice Collada Jr., MD
 James C. Collias, MD
 William F. Collins Jr., MD
 Gary P. Colon, MD
 G. Rees Cosgrove, MD, FRCSC
 Philippe Coubes, MD, PhD
 Jean-Valery C. E. Coumans, MD
 Dr. & Mrs. John S. Crutchfield
 John T. Cummings Jr., MD
 Vasco F. Da Silva, MD
 Mark D. D'Alise, MD, FACS
 Ghodrat O. Daneshdoost, MD
 Kaushik Das, MD
 Lycurgus M. Davey, MD
 John D. Davis IV, MD
 Maurice J. Day Jr., MD
 DCS Regional Administrators
 Carlo M. De Luna, MD
 Fernando Delasotta, MD, FACS
 Department of the Navy
 Paul D. Dernbach, MD
 William O. DeWeese, MD
 George V. Di Giacinto, MD
 Victor Manuel Diaz-Simental, MD
 Phillip S. Dickey, MD
 Donald D. Dietze Jr., MD
 Peter B. Dirks, MD
 Richard A. Dirrenberger, MD, FACS
 Gary A. Dix, MD
 Patrick F. Doherty, MD
 Eugen James Dolan, MD
 Pedro R. Dominguez Jr., MD
 Michael Dorsen, MD, FACS
 Clifford C. Douglas, MD, PhD

Werner K. Doyle, MD, FACS
 Michael J. Doyle, MD
 James M. Drake, MD
 M. Lawrence Drerup, MD, FACS
 Luis E. Duarte, MD, FACS
 Derek A. Duke, MD
 Dr. & Mrs. Scott C. Dulebohn
 John J. Dusseau, MD
 Doros Economos, MD
 Alan Edelman, MD
 Fredric L. Edelman, MD
 Susan Eget
 Bruce L. Ehni, MD
 Eldan B. Eichbaum, MD
 Mark B. Eisenberg, MD
 Dr. & Mrs. Winston S. Ekren
 J. Paul Elliott, MD
 Dr. & Mrs. Patrick W. Elwood
 Jerry Engelberg, MD
 Mr. & Mrs. Ronald W. Engelbreit
 Herbert H. Engelhard III, MD, PhD
 Fred J. Epstein, MD
 Mark S. Ercius, MD
 Phillip G. Esce, MD
 Jaime Espinosa, MD
 Dr. & Mrs. Bruce A. Everett
 Alain Y. Fabi, MD
 W. Brenton Faircloth, MD
 Dr. & Mrs. Jacques N. Farkas
 Sandy Felgar
 Robert A. Fenstermaker, MD
 E. Malcolm Field, MD
 Andrew D. Fine, MD
 Igor Fineman, MD
 Sanford Fineman, MD, FACS
 Katrina S. Firlik, MD
 Robert E. Flandry Jr., MD FAC
 Jeffrey Evan Florman, MD
 Thomas B. Flynn, MD
 Kevin T. Foley, MD
 Modesto Fontanez, MD, JD, FACS
 Thomas R. Forget Jr., MD
 George Foroglou, MD
 Lawrence J. Frazin, MD, FACS
 Michael H. Freed, MD
 Andrew Freese, MD, PhD
 Barry N. French, MD
 Kai U. Frerichs, MD
 Marc H. Friedberg, MD, PhD
 Robert M. Friedlander, MD
 Phillip Friedman, MD, FACS
 Stanley W. Fronczak, MD, JD, FACS
 Kimball S. Fuiks, MD
 Yohsuke Fukami, MD
 Kazuhide Furuya, MD, DMSc
 Regan Shawn Gallaher, MD
 Daniel D. Galyon, MD, FACS
 William F. Ganz, MD, FACS
 Stephen R. Gardner, MD, FACS
 Mark A. Gardon, MD
 John Joseph Gartman Jr., MD

Richard E. George Jr., MD
 Mark B. Gerber, MD
 John W. German, MD
 John William Gianino, MD
 Michael Gieger, MD
 Holly S. Gilmer-Hill, MD
 Roberta P. Glick, MD
 Alexandra J. Golby, MD
 Marc S. Goldman, MD
 Dr. & Mrs. Stanley J. Goodman
 Stuart Glenn Goodman, MD
 Isaac Goodrich, MD
 Charles R. Gordon, MD
 Ravindra N. Goyal, MD, FACS
 Jordan C. Grabel, MD
 Jon F. Graham, MD, FACS
 Walter Grand, MD
 Richard N. V. Gray, MD
 Jeffrey A. Greenberg, MD
 Richard P. Greenberg, MD, PhD
 Henry J. Greenwood, MD, FACS
 C. Russ Greer, MD
 Frederick K. Gregorius, MD, FACS
 Peter J. Grillo, MD, FACS
 Dr. & Mrs. John J. Guarnaschelli
 Maria A. Guglielmo, MD
 Lisa L. Guyot, MD, PhD
 Stephen J. Haines, MD
 Anthony James Hall, MD, FACS
 In-Suk Hamm, MD, PhD
 Kimberly S. Harbaugh, MD
 James E. Harper, RN, MS, NP
 Mrs. Sandra E. Harris
 Larry P. Hartman, MD
 Robert F. Heary, MD
 Amy B. Heimberger, MD
 Tomasz K. Helenowski, MD
 Douglas Hershkowitz, MD
 Eugene E. Herzberger, MD
 Stephen W. Hipp, MD
 Alan D. Hirschfeld, MD
 Brent N. Hisey, MD
 Mary Louise Hlavin, MD
 Jonathan E. Hodes, MD
 Philip J. Hodge, MD
 Peter H. Hollis, MD
 Robert F. Hollis III, MD
 Robert N. N. Holtzman, MD
 Robert S. Hood, MD
 Jonathan W. Hopkins, MD
 Terry Horner, MD
 Donald D. Horton, MD
 Zenko J. Hrynkiw, MD
 W. Robert Hudgins, MD
 George V. Huffmon III, MD
 Alan T. Hunstock, MD
 Keisuke Ishii, MD, PhD
 Bermans J. Iskandar, MD
 Masanori Itoh, MD
 Avery M. Jackson III, MD
 Woodrow Janese, MD, FACS
 Dale K. Johns, MD

Toshifumi Kamiryo, MD
 Tetsuo Kanno, MD
 Jeff Karbowski
 Dong H. Kim, MD
 Se-Hoon Kim
 Dr. & Mrs. Laurence I. Kleiner
 Thomas A. Kopitnik Jr., MD
 Barry A. Kriegsfeld, MD
 Mark J. Krinock, MD
 John J. Kruse, DMD, MD
 Mark J. Kubala, MD
 David C. Y. Kung, MD
 Sagi M. Kuznits, MD
 Robert Lacin, MD
 Cornelius H. Lam, MD
 Dr. J. Landau, MD
 Frederick F. Lang Jr., MD
 David J. Langer, MD
 Todd Hopkins Lanman, MD
 Jorge J. Lastra-Power, MD
 Barbara E. Lazio, MD
 James J. Leech, MD
 James W. Leiphart, MD, PhD
 David C. Leppla, MD
 Mitchell Edward Levine, MD
 Jodie K. Levitt, MD
 Philip Levitt, MD, PA
 Adam I. Lewis, MD
 Kevin O. Lillehei, MD
 James G. Lindley Jr., MD
 Dr. & Mrs. John D. Loeser
 Thomas S. Loftus, MD
 Douglas J. Long, MD
 James G. Lowe, MD
 William Y. Lu, MD
 Dr. & Mrs. L. Dade Lunsford
 Mark A. Lyerly, MD
 Thomas A. Lyons, MD
 Shiyoji Mabuchi, MD
 R. W. Mackie, MD
 Joseph R. Madsen, MD
 Dr. & Mrs. Hisham S. Majzoub
 Dan Makney
 Dennis R. Malkasian, MD, PhD
 Eileen M. Maloney Wilensky,
 MSN, ACNP
 Stavros N. Maltezos, MD
 Robert F. Mann, MD
 Raul Marino Jr., MD
 Jonathan E. Martin, MD
 Kirk Martin
 Clinton Edward Massey, MD
 Eric M. Massicotte, MD, MSc
 Luciano Mastronardi, MD
 Peter L. Mayer, MD
 Kevin M. McGrail, MD
 Guy M. McKhann II, MD
 Mark R. McLaughlin, MD
 Christie M. McMorrow, MD
 Fred G. McMurry, MD
 John H. McVicker, MD
 Continued on page 34

N R E F D O N O R S

Continued from page 33

Michael James Meagher, MD
 Miguel Angel Melgar, MD, PhD
 Mark E. Meyer, MD
 Yves J. Meyer, MD
 Bruce E. Mickey, MD
 Troy H. Middleton III, MD
 Luis A. Mignucci, MD
 Jimmy D. Miller, MD, JD
 Ena Isabel Miller Molina, MD
 Abraham Mintz, MD
 Junichi Mizuno, MD
 Ashok Modha, MD, FRCSC
 Michael C. Molleston, MD
 James A. Moody, MD
 Dante Joseph Morassutti, MD
 Michael K. Morgan, MD
 John LeRoy Moriarity Jr., MD
 David Lawrence Morris, MD
 Harrison T. M. Mu, MD
 Bradford B. Mullin, MD
 Kevin J. Mullins, MD, PC
 Edward C. Murphy, MD
 Joseph M. Nadell, MD
 Somnath N. Nair, MD
 Satoshi Nakasu, MD
 Emilio M. Nardone, MD
 Alfred T. Nelson Jr., MD
 Hazel M. Neufeld, PA-C
 David B. Niemann, MD
 Shigeru Nishizawa, MD, PhD
 Fariborz Nobandegani, MD
 Thorikild V. Norregaard, MD
 Masayoshi Ohi, MD
 Jeffrey G. Ojemann, MD
 Hidehiro Oka, MD, DMSc
 Shige-Hisa Okawara, MD, PhD
 Richard A. Olafson, MD
 Edward H. Oldfield, MD
 Rick E. Olson, MD
 Joe I. Ordia, MD
 Joan Frances O'Shea, MD
 Jewell L. Osterholm, MD
 Christoph B. Ostertag, MD
 Kenneth H. Ott, MD
 M. Chris Overby, MD
 John R. Pace, MD
 Luis R. Pagan, MD
 Kimberly A. Page, MD
 Carlos A. Palacio, MD
 Salvatore J. Palumbo, MD
 Necmettin M Pampir, MD
 Christopher G. Paramore, MD
 Joseph C. Parker Jr., MD
 Dwight Parkinson, MD
 Raquel Pasaron MSN, CNRN
 Jeffrey Erle Pearce, MD
 Stan Pelofsky, MD
 Terrence L. Pencek, MD, PhD
 Bruce Pendleton, MD
 Noel I. Perin, MD
 Dr. & Mrs. John G. Phillips
 Gautam Phookan, MD
 Daniel R. Pieper, MD
 L. Normand Poirier, MD
 Mark R. Proctor, MD

Dr. & Mrs. Gregory J. Przybylski
 Dr. & Mrs. Morris Wade Pulliam
 Michael Howard Rabin, MD
 Mohammed Rafiullah, MD
 Iftikhar Ali Raja, MD
 William M. Rambo Jr., MD
 Ruben Ramirez Del Toro, MD
 Gustavo Ramos, MD
 Sanjay C. Rao, MD
 Lawrence G. Rapp, MD
 Charles D. Ray, MD
 D. Raja Reddy, MD
 Rogelio Revuelta, MD
 W. Emery Reynolds, MD
 R. L. Patrick Rhoten, MD
 Howard Anthony Richter, MD
 Nathan Rifkinson, MD
 Thomas W. Rigsby, MD
 Scott C. Robertson, MD
 Thomas G. Rodenhouse, MD
 Jose L. Rodriguez, MD, FACS
 Rafael Rodriguez-Mercado, MD, FACS
 Juan F. Ronderos, MD
 Julio E. Rosado Jr., MD
 Dr. & Mrs. Hubert L. Rosomoff
 Matthew J. Ross, MD
 David Rothbart, MD, FACS
 Christopher S. Rumana, MD
 John B. Runnels, MD
 Romolo H. Russo, MD, FACS
 Patrick G. Ryan, MD
 Ralph Edward Rydell, MD
 James Karl Sabshin, MD
 Christian Sainte-Rose, MD
 Toshisuke Sakaki, MD
 Victoria R. Samuels-Monge, MD
 Kiyoshi Sato, MD
 Paul D. Sawin, MD
 Leslie Schaffer, MD
 Gerald R. Schell, MD
 Wouter I. Schievink, MD
 Frank Schinco, MD
 Giuseppe Schisano, MD
 John H. Schneider Jr., MD
 William A. Schwank, MD
 John M. Seelig, MD
 Harold D. Segal, MD
 Brad A. Selland, MD
 David Louis Semenoff, MD
 Set Shahbadian, MD
 George B. Shanno, MD
 Donald Sheffel, MD
 Peter E. Sheptak, MD
 Chun-jeun Shih, MD
 Suk-Keun Shin, MD
 Grant H. Shumaker, MD
 Robert J. Sieling, MD
 Harold K. Smith, MD
 Mark Vogel Smith, MD
 William D. Smith, MD
 Matthew D. Smyth, MD
 Robert A. Solomon, MD
 Donald Soloniuk, MD
 Mark A. Spatola, MD
 Lawrence M. Spetka, MD

Daniel E. Spitzer, MD
 Thomas A. Staner, MD
 John D. Steichen, MD
 Paul Steinbok, MD
 Erick Stephanian, MD
 Sigurdur A. Stephensen, MD
 Daniel R. Stough, MD
 Richard B. Stovall, MD
 Douglas L. Stringer, MD
 Narayan Stringer, MD
 Ann R. Stroink, MD
 Michael G. Sugarman, MD
 Peter P. Sun, MD
 Sumedaresan, MD
 Shigeharu Suzuki, MD
 Satoshi Suzuki, MD, PhD
 Asher H. Taban, MD
 Kiyoshi Takagi, MD
 Kintomo Takakura, MD, PhD
 Philip W. Tally, MD
 Charles H. Tator, MD, PhD, MA
 Tetsuo Tatsumi, MD
 Ethan Taub, MD
 Robert Theodore Tenny, MD
 Basil C. Theodotou, MD, PA
 James A. Tiesi, MD
 Albert Leo Timperman, MD
 Sidney Tolchin, MD
 Hernando Torres-Chavez, MD
 John S. Treves, MD
 Jaime A. Trueba-Reyes, MD
 Goro Tsuchiya, MD
 Gerald F. Tuite Jr., MD
 Sagun K. Tuli, MD, FRCSC
 Donn Martin Turner, MD
 David D. Udehn, MD
 John G. Van Gilder, MD
 Alan S. Van Norman, MD
 Gary D. Vander Ark, MD
 G. Edward Vates, MD, PhD
 Troy M. Vaughn, MD
 Pamela Verdi
 Wayne G. Villanueva, MD, FACS
 John J. Viola, MD
 Kelvin A. Von Roenn, MD
 Dr. & Mrs. Ronald Wadle
 Carol M. Wadon, MD
 Joseph C. Watson, MD
 Tim J. Watt, MD
 Jed P. Weber, MD
 Martin E. Weinand, MD
 Howard L. Weiner, MD
 Steven S. Weinschel, MD
 David Leslie Weinsweig, MD
 Tadeusz Wellisz, MD
 Richard M. Westmark, MD
 Collier S. Wiese, PA-C
 Fred C. Williams Jr., MD
 Philip J. A. Willman, MD
 Dennis D. Winters, MD
 Timothy C. Wirt, MD
 Jeffrey H. Wisoff, MD
 Daniel Won, MD
 Eric J. Woodard, MD
 Shinya Yamada, MD, PhD

Shokei Yamada, MD
 Masaaki Yamamoto, MD
 Philip A. Yazbak, MD, FACS
 David Allan Yazdan, MD
 Joseph S. Yazdi, MD
 John Yen, MD
 Howard Yonas, MD
 Peter K. Yoon, MD
 Julie E. York, MD
 Jacob N. Young, MD
 Joseph M. Zabramski, MD
 Ahmad Zakeri, MD
 John L. Zinkel, MD, PhD
 Khosrow Zolfoghary, MD

Gifts up to \$99

Robert E. Aldrich Jr., PA-C
 Maria Arnold
 Mr. & Mrs. Kevin Asher
 Ruth Baidas
 Roxanne Barrick
 W. Ben Blackett, MD, JD
 S. Marshall Cushman, MD
 Jeff Dailey
 Mr. & Mrs. John Darin
 Mark A. J. Dexter, MD
 Robert E. Dicks III, MD
 Diana Dunn
 Frances E. Elliott
 Mr. & Mrs. Steve Freel
 Takamitsu Fujimaki, MD, PhD
 Priscilla Gay
 Robert Greene
 Mr. & Mrs. Chip Gregory
 Joan Herlitz
 Mr. & Mrs. Dan Hess
 Kimiyoshi Hirakawa, MD
 Elizabeth F. Hobbs
 Maurizio Iacoangeli, MD
 Sybil M. Joseph
 Mr. & Mrs. Charles Kirby
 Mr. & Mrs. Roy Krauthamer
 John David Laidlaw, FRACS
 Roberto Martinez-Alvarez, MD, PhD
 Mr. & Mrs. Richard McIntyre
 Akio Morita, MD, PhD
 Marwan Najjar, MD
 Dr. & Mrs. Ronald A. Naumann
 Debbie Oben
 Kristan Pasek
 Chris A. Phillips
 Josep M. Prim, MD, PhD
 Justin W. Renaudin, MD
 Mr. & Mrs. Samuel Salloum
 Evelyn Settles
 Mr. & Mrs. Harry Shapiro
 Dr. & Mrs. Jeffrey Wayne Sherman
 Roger W. Shortz, MD, FACS
 Harish N. Shownkeen, MD
 Marcus Stoodley, MD, PhD
 Janet Streng
 Masao Sugita, MD
 Katressa D. Tipton
 Mr. & Mrs. Robert A. Weinerman
 Lynne Wood

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

Annual Meeting: Neurosurgery Also Means Business

Socioeconomic Programs Support Neurosurgical Practice

MANDA J. SEAVER

The focus of any AANS annual meeting always is clearly and firmly on the science of neurosurgery. The 2005 AANS Annual Meeting in New Orleans, themed Education and Innovation, amply demonstrates this focus with three plenary sessions, five scientific sessions, nine subspecialty section sessions, and more. The meeting, held April 16-21, offers a new special scientific session on Thursday—Neurosurgery With the Masters: In My Experience—featuring prominent neurosurgeons who relate intraoperative nuances for several procedures.

This exceptional scientific programming is complemented not only by exuberant social programming set in the historical city of New Orleans, but also by socioeconomic programming that supports the practice of neurosurgery.

As a prelude to the main meeting, practical clinics held Saturday and Sunday offer in-depth study of clinical topics, as do breakfast seminars throughout the week. Several of these programs also lend support for the practice of neurosurgery. Two different PowerPoint courses help practitioners incorporate X-rays, video and other clinical aspects into polished presentations, while coding courses aim to improve revenue through correct coding and accurate use of modifiers. Courses on hand-held computing and moving a practice into the digital age help improve the bottom line, a subject that is the focus of an entire breakfast seminar aptly titled Improving Your Bottom Line in Today's Neurosurgical Practice.

Two programs address financial planning, with one focusing on risk management and the other on retirement. A course on advanced leadership skills seeks to help neurosurgeons maximize opportunities within hospitals and communities to foster financial success and career satisfaction as well as leverage their value to a hospital. A media training seminar provides information on how to communicate complex clinical procedures effectively through print and broadcast media and allows participants to hone a dynamic "on camera" presence.

These media skills can be used in combating the medical liability crisis, a topic which is addressed in Preparation for Medical/Legal Testimony and in Medical Liability: How to Develop an Action Plan.

The medical liability crisis figures prominently in a special Thursday morning socioeconomic session moderated by Rick Boop, MD, and David Jimenez, MD, both members of the *Bulletin* Advisory Board. The program leads off with an update of AANS/CNS Washington Committee activities, followed by reports on two different studies that track malpractice claims over time. Practice patterns are the focus of two presentations, one elucidating practice patterns of women neurosurgeons in the United States, and the other looking at practice and healthcare challenges in the next decade. The 80-hour work week for neurosurgical residents is revisited in a study of its impact at the University of Oklahoma.

Looking ahead to next year, the 2006 AANS Annual Meeting will be held April 22-27 in San Francisco, Calif. ■

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

2005 ANNUAL MEETING PROGRAM AT A GLANCE

SATURDAY, APRIL 16, 2005

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

SUNDAY, APRIL 17, 2005

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

MONDAY, APRIL 18, 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 I	9:45 AM–1:00 PM
Richard C. Schneider Lecture— <i>Julian T. Hoff, MD</i>	
Presidential Address— <i>Robert A. Ratcheson, MD</i>	
Lunch in Exhibit Hall/Poster Viewing	1:00 PM–2:45 PM
Scientific Sessions	2:45 PM–5:30 PM
Ronald L. Bittner Lecture— <i>Darell Bigner, MD</i>	
Joint Annual Meeting of the AANS and the American Association of Neurosurgeons	5:30 PM–6:30 PM

TUESDAY, APRIL 19, 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
Van Wagenen Lecture— <i>Professor Charles Warlow</i>	
Cushing Orator— <i>Edmund Morris</i>	
Lunch in Exhibit Hall/Poster Viewing	1:00 PM–2:45 PM
Section Sessions	2:45 PM–5:30 PM

WEDNESDAY, APRIL 20, 2005

Registration	6:45 AM–3:30 PM
Breakfast Seminars	7:30 AM–9:30 AM
Exhibits	9:00 AM–4:00 PM
Plenary Session III	9:45 AM–1:00 PM
Theodore Kurze Lecture— <i>Martin H. Weiss, MD, FACS</i>	
Rhoton Family Lecture— <i>Robert G. Grossman, MD</i>	
Hunt-Wilson Lecture— <i>Henry J. Peter Ralston III, MD</i>	
Lunch in Exhibit Hall/Poster Viewing	1:00 PM–2:45 PM
Section Sessions	2:45 PM–5:30 PM
International Reception	6:00 PM–7:30 PM

THURSDAY, APRIL 21, 2005

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>	

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

2004 DMLR Campaign Posts Huge Successes

Through NPHCA, Neurosurgery Presses On for Liability Reform

When leaders from many of the high-risk specialties sat down to discuss the medical liability crisis 18 months ago, few envisioned that they would be able to organize, create and launch a campaign as large and dynamic as that which Doctors for Medical Liability Reform put together in 2004. Neurosurgery participates in the DMLR coalition of specialties through Neurosurgeons to Preserve Health Care Access, known as NPHCA. The power of DMLR's 230,000 physicians working toward one goal has been astounding and has shown that when the specialties work together, progress can and will happen.

The goal of DMLR's 2004 Protect Patients Now campaign was to tell medicine's story in a hard-hitting, compelling way that would inform voters about the crisis and force political candidates to take a position on the issue of medical liability reform. After the U.S. House of Representatives passed medical liability reform legislation for the third time in 20 months on May 12, 2004, DMLR turned its attention to picking up additional pro-reform votes in the U.S. Senate. DMLR set out to target three to five Senate races with hopes of picking up two or three pro-liability votes. The campaign, ultimately deployed in four states, gained three new votes for reform toward the magic number of 60 votes required to pass reform in the Senate.

In total, pro-reform candidates won in six out of eight open Senate races with victories in Florida, Georgia, Louisiana, North Carolina, Oklahoma, and South Carolina. In addition, pro-reform candidates staved off tough competition in Alaska and Kentucky. In South Dakota, pro-reform candidate John Thune pulled off a stunning victory over former Senate Democratic Leader Tom Daschle. DMLR thus helped narrow the possible votes needed to override a filibuster from 11 to 7 in one election cycle.

2004 Campaign Overview

DMLR officially launched its \$8 million campaign in February 2004. While the campaign focused on states with key Senate races, including Washington, North Carolina, South Carolina, and Georgia, there was also a national element. Through television newsmagazines, newspaper and radio advertisements, the medical liability reform pledge, the Web site and a dynamic grassroots effort, DMLR fought tirelessly for medical liability reform through Election Day.

The Newsmagazines The centerpiece of the public education campaign was the 30-minute television newsmagazine programs, which featured real doctors and real patients relating true-life stories about the medical liability crisis. Dozens of physicians, including many neurosurgeons, and patients told their stories in the newsmagazines and asked Americans and policymakers to protect



On Feb. 10 the need for federal medical liability reform legislation that includes a \$250,000 cap on noneconomic damages, among other things, was the subject of testimony by AANS Treasurer James R. Bean, MD, before the House Energy and Commerce Health Subcommittee. Dr. Bean spoke on behalf of the Alliance of Specialty Medicine, a coalition of 13 medical specialty societies. The full text of the Alliance's statement can be found at www.specialtydocs.org.

patient access to healthcare by supporting medical liability reform. In total, the newsmagazines ran 2,797 times in 19 media markets and were seen by more than 13 million Americans. Besides being viewed by millions of voters on network television in four key states, many of the 230,000 DMLR physician members also aired copies of the newsmagazines in their office waiting rooms or over internal hospital stations.

The Advertisements DMLR also ran focused, targeted full-page paid advertisements in newspapers. In target states ads that explained the crisis ran in the Seattle Times, the Raleigh News and Observer, the Atlanta Journal-Constitution, and the Charleston Post and Courier. Nationally, ads that explained the financial impact of the crisis on businesses and local economies ran in the Wall Street Journal and USA Today. Inside the Beltway, ads that urged support for specific liability bills ran in the Washington Post and Capitol Hill publications.

Earned Media The DMLR campaign earned unpaid media placements by generating hundreds of radio, print and television stories about the campaign and the medical liability crisis. The press office fielded calls from more than 310 reporters and overall the earned media outlets reporting on the campaign had a circulation of nearly 6 million readers, listeners and viewers, and generated more than 2 million media impressions.

The Web Site Both the newsmagazines and the ads directed viewers to the DMLR Web site, www.protectpatientsnow.org, which still is active today. The Web site carries extensive information on the campaign and state-by-state information on the medical liability crisis. Regularly updated data on the crisis, its affect on patient access to

healthcare, the local economy and dozens of other factors is just a click away. Visitors to the Web site can watch and download the news-magazines and also view the ads and other campaign materials. The Web site, which serves as a portal for citizens to e-mail or fax a letter to their senators urging them to support reform, received more than 14,000 hits daily during the campaign.

The Pledge DMLR educational materials all had a single focus: to make medical liability reform a campaign issue in 2004. To ensure that candidates were aware of the issue and developed a position on reform, the DMLR pledge was created. By signing the pledge, candidates promised to “unequivocally support medical liability reform” by “seeking passage of federal legislation that would include an effective limit on noneconomic damages.” In total, 43 candidates for federal office signed the pledge. Notable signatories who won election to the U.S. Senate included: Richard Burr, R-N.C.; Jim DeMint, R-S.C.; Johnny Isakson, R-Ga.; Tom Coburn, R-Okla.; Arlen Specter, R-Pa.; Lisa Murkowski, R-Alaska; David Vitter, R-La.; and Mel Martinez, R-Fla.

Grassroots Development During the campaign, DMLR created networks of physicians, medical groups, business organizations and patients in its targeted states. Through these grassroots networks, DMLR identified local spokespersons, organized events, wrote letters and editorials, and monitored progress on the ground. The Web site proved to be an effective grassroots tool, not only conveying information but also allowing individuals to indicate their support for DMLR and reform and a massive listing of supporters to be created.

Looking Forward to 2005 and Beyond

DMLR's goal for 2005 is to pass federal medical liability reform. The legislative priorities released by both President Bush and Senate Majority Leader Bill Frist, MD, put medical liability reform near the top. DMLR's leadership will call on every one of our 230,000 members to put every ounce of energy they have into lobbying their respective senators to 1) support a comprehensive medical liability reform bill that includes, among other things, a reasonable limit on noneconomic damages; 2) debate that bill; and 3) have an up-and-down vote on its merits. If opponents of reform filibuster the legislation, the DMLR will use hard-hitting tactics to break the impasse. While success of federal reform legislation cannot be guaranteed, it is certain that no one will be working harder for its passage than DMLR.

To reach its goal, DMLR will expand grassroots and earned media campaigns in 2005. The DMLR's best assets are its 230,000 physician members and the patients they serve, and both of these resources will be mobilized and utilized fully. In addition, DMLR will reach out to other medical groups that share the goal of passing federal medical liability reform, adding to the number of voices raised in support of reform. When a medical liability reform bill is introduced, DMLR's army of advocates will be prepared to march to Capitol Hill with ads, testimony, briefing materials, news releases and grassroots alerts in hand.

If need be, DMLR also will begin laying the groundwork for a U.S. Senate campaign in 2006. Once again, efforts will focus on vulnerable anti-reform candidates and bringing the issue of medical liability reform to the fore in their races. It is imperative that elected officials understand that there are consequences for voting against protecting patient access to healthcare. In 2005, DMLR will be monitoring the positions of elected officials and possible candidates and declaring its support for pro-reform candidates early and loudly.

Neurosurgeons Can Support Reform Through NPHCA

In 2003 and 2004 neurosurgeons answered the call to action and actively participated in the DMLR's Protect Patients Now campaign in many ways, including writing letters to Congress, speaking out in the media, and educating their patients about the issues. Most importantly, however, neurosurgeons helped fuel the campaign engine by contributing over \$2 million to help fund the effort.

As the 2005 campaign moves forward, once again the support of every neurosurgeon is needed to help assemble the multimillion dollar war chest that is necessary in order to produce a hard-hitting advertising campaign that focuses public and U.S. Senate attention on the medical liability crisis. Organized neurosurgery will continue to participate in DMLR through NPHCA. As a non-profit advocacy organization, NPHCA can receive contributions from corporations and individuals, and there are no limits on the amount of money that individuals can contribute.

Medical liability reform is within our grasp. With a few minutes of time and a contribution that each neurosurgeon can afford, victory can be achieved for all doctors and patients. ■

A. John Popp, MD, is chair of Neurosurgeons to Preserve Health Care Access.
Katie O. Orrico, JD, is director of the AANS/CNS Washington office.

DMLR

Doctors for Medical Liability Reform is a coalition of 230,000 practicing medical specialists with one goal: protecting patient access to healthcare by the passage of federal medical liability reform. DMLR's membership includes:

- Neurosurgeons to Preserve Health Care Access (AANS and CNS)
- American Association of Orthopaedic Surgeons
- American College of Emergency Physicians
- OB-GYNs for Women's Health
- American College of Surgeons Professional Association
- The Society of Thoracic Surgeons

- American College of Cardiology
- American Academy of Dermatology Association
- National Association of Spine Specialists
- American Urological Association
- American Society of Plastic Surgeons

NPHCA

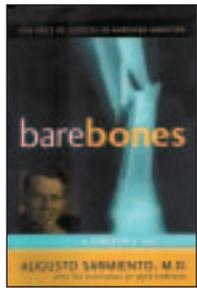
www.neuros2preserve.org

Contributions to Neurosurgeons to Preserve Health Care Access (the AANS and the CNS) can be sent to:

NPHCA
5550 Meadowbrook Drive
Rolling Meadows, IL 60008

Physician Authors Offer Insight, Advice

New Books Tackle Medical Liability, Lost Idealism



Tilting at Windmills

Bare Bones: A Surgeon's Tale: The Price of Success in American Medicine, by Augusto Sarmiento, MD, with Mark Dorfman, 2004, Prometheus Books, Amherst, N.Y., 379 pp., \$32.

Don Quixote, Cervantes' indelible idealist, is the hero of *Bare Bones*' author, Augusto Sarmiento, MD; you do not have to read very far into this book to

learn that they have a lot in common.

Bare Bones is basically the autobiography of a famous American orthopedist. Dr. Sarmiento was chair of the orthopedic departments at the University of Miami and the University of Southern California, and he was 1991-92 president of the American Academy of Orthopaedic Surgeons. His journey to the top in his specialty was unusual in that he was born in Columbia and did not move to the United States until he had completed medical school.

He records interesting experiences in rising from his humble beginnings as an immigrant speaking only Spanish to become an academic superstar.

One of the themes frequently repeated in the book is the importance of a well-rounded, liberal arts education. Dr. Sarmiento amply demonstrates his own education in literature by using quotes from writers he admires to head each chapter. He expresses profound disappointment that today's trainees seem to have little interest in the classics or in basic science education and instead seem to be interested only learning to do procedures well.

Dr. Sarmiento feels that physicians in the United States have lost their calling and are endangering their professionalism. He believes that "...unrestrained greed and the business interest of the healthcare industry overpower the philosophy, values, and ethics of medicine." He thinks that governmental programs such as Medicare and Medicaid have been responsible for this unfortunate transformation in American medicine: "The federal largesse, intended to satiate the medical community's need for more income, only generated more greed." He blames managed care, "a social illness that is far more threatening to our patients than the original disease," for fostering this transformation of American medicine. He also feels that many surgical procedures are done because of reimbursement rather than sound medical indications, and is very critical of hospital departments that treat patients on the basis of reimbursable conditions rather than clinical indications.

Dr. Sarmiento is convinced that there are too many medical journals and that residents spend most of their reading time with industry-sponsored, throw-away publications. He feels that there

is a great deal of dishonesty in research that is published for career advancement rather than for the advancement of knowledge.

This book's most stinging criticism is reserved for the orthopedic-industrial complex. He decries the pervasive influence of instrument manufactures on surgical education. Dr. Sarmiento, a hip replacement specialist who himself has a prosthesis (one of more than three hundred different prostheses available today), has received very significant support from this industry and must know what he is talking about.

For medicine, the goal is to help the patient. For industry, the goal is to maximize profit-shares. Physicians need to be aware of the danger presented by this conflict. For example, industry support makes educational meetings possible; but industry expects, and has received, control of speakers and topics. Dr. Sarmiento does not believe that orthopedic surgeons should become salespeople for industry. He thinks orthopedists must learn "there is no such thing as a free lunch."

Some of his concerns are being dealt with. The Office of Inspector General at the Centers for Medicare and Medicaid Services has taken a hard line on making educational programs more honest. The Accreditation Council for Continuing Medical Education has passed new, very restrictive rules for educational programs.

Many of his concerns however, need to be addressed by our neurosurgical organizations. It's time for a renewed dedication to professionalism in American medicine. Let's make sure that we respond appropriately to this book.

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.

Pulse Point

The American Association of Neurological Surgeons is among the medical organizations that have taken steps to ensure professional and ethical interactions with corporate partners. Most recently, the AANS released its Guidelines for Corporate Relations. Read about the guidelines in Governance, inside this issue of the *Bulletin*.

Book Aims to Help Docs Avoid Litigation

Medical Malpractice, A Physician's Sourcebook, edited by Richard E. Anderson, MD, FACP, 2004, Humana Press, Totowa, N.J., 328 pp., \$59.

This book lives up to the promise inherent in its title; it provides useful and authoritative information that every practicing physician should know about litigation. And although the topic doesn't come instantly to mind as making for a great read, the book achieves that as well. It discusses

the complicated story of medical malpractice from various perspectives and includes numerous insights into the problem and many thoughts on solutions. The book is divided into four sections, each of which includes very well organized and well-written chapters by a panel of physicians, attorneys, academics, researchers, and insurance industry experts.

Part one, "Insurance," provides an overview of insurance, with a focus on professional liability. You'll learn enough about the fundamentals and jargon of insurance to feel very comfortable with the topic, plus much more—for example, why the true value of a policy may not be apparent until years after the choice.

In part two, "Legal," the first two chapters are must-reads. The first chapter addresses why your own active and intelligent participation in your case is paramount for a successful outcome. The next chapter offers a look at malpractice litigation from the viewpoint of the plaintiff attorney. The author of this chapter explains the approach a plaintiff attorney might well use in determining if your case is the one that will be pursued. He also makes the strong point that keeping your patient away from an attorney's office is the first step, but if the patient does indeed go to an attorney, the author describes how to discourage the attorney from accepting the case. If you continue reading in part two, you'll be rewarded with more insights and advice. For example, you'll obtain practical suggestions for how to serve as an expert witness in medical malpractice litigation and how to get through pretrial discovery and the deposition process.

Part three, "The Clinical Face of Litigation," includes chapters written by physicians who discuss malpractice litigation from the perspective of a particular specialty—family practice, emergency medicine, anesthesiology, obstetrics and gynecology, and plastic and reconstructive surgery. Unfortunately, there is no chapter from the perspective of the neurosurgeon. This being noted, the chapters on other specialties include much useful information and perspective, and for the most part, they are well worth reading. Chapters on breast cancer litigation and Pap smear litigation are included in this section as well, as are several covering e-medicine, patient safety, and effective communication. You'll learn that patient anger underlies many malpractice claims and that such anger often can be traced to a breakdown in communication. Useful discussions on the art of listening and guidelines for telephone- and Internet-based care round out this section.

Part four, "Legal Reform and Health Care," talks about how the healthcare system interfaces with both law and policy and explores alternatives to the current system. Several very thoughtful chapters are found here. One provides four options for comprehensive liability reform, another argues for fundamental changes in the system rather than tinkering with tort doctrine, and a third argues that modern medicine should be viewed as a collaborative enterprise and that the risk should be spread accordingly. This part of the book is excellent and thought-provoking.

Along with much useful advice from experts in the field, the book is laden with interesting, alarming, and compelling statistics. I was also struck by a recurring theme in many of the chapters. While it may seem intuitive to many, the fact that so many of the authors reiterated the concept makes me inclined to note it as well: Documentation and open communication (defined as always giving an explanation of what is going on, and showing you care) are keys to avoiding litigation altogether, or at least, when a case is brought litigation suit, in achieving a positive outcome.

As mentioned, one disappointing aspect of the book is that there is not much specifically for the neurosurgeon (except to learn, in case you need to be told, that neurosurgery is one of the highest-liability specialties, with the added note that the younger the patient, the more the risk). However, the overall usefulness of the book far outweighs this aspect. The vast majority of the chapters remain salient for the neurosurgeon, even many of those written with a focus on another specialty. ■

Cheryl A. Muszynski, MD, is a neurosurgeon at Children's Hospital of Wisconsin and associate professor of neurosurgery at the Medical College of Wisconsin.



Endovascular Neurosurgery's Bright Future

New Technologies on the Horizon for Aneurysms and More

A revolution in endovascular techniques as they pertain to the management of central nervous system diseases has occurred over the last 30 years. Refinements in the engineering of microcatheters and guide wires have made once inaccessible sites within the cerebrovasculature accessible. In addition, the development of detachable coil technology has fundamentally changed the way cerebral aneurysms are treated. Similarly, the production of adhesive embolizates and the manufacture of flexible stents specifically designed for the brachiocephalic and cerebral circulations have dramatically advanced the management of central nervous system arteriovenous malformations, cerebral aneurysms and atherosclerosis of the head and neck vessels.

Managing Cerebral Aneurysms

Of all the diseases within the realm of endovascular treatment, cerebral aneurysms continue to pose the greatest management challenge. The recent development of flexible stents specifically designed for navigation within the cerebral vasculature has expanded the application of coil embolization to aneurysms with wider necks. Furthermore, the production of biologically active coils, namely those that promote a neo-endothelial response at the neck of the aneurysm as well as those that expand within the aneurysm after deployment, has improved the endovascular management of more anatomically challenging aneurysms. Nonetheless, advances in the endovascular management of cerebral aneurysms likely will emerge on a number of different fronts.

Covered Stents Already employed in coronary interventions for the management of acute vessel injuries, covered stents offer a promising treatment solution for aneurysms of the cerebral vasculature that do not involve segments in which critical branches or perforating arteries arise. The cavernous portion of the carotid artery is perhaps the most amenable segment of the cerebral vasculature where covered stents could be used not only to treat enlarging, symptomatic aneurysms, but also carotid-cavernous fistulas. Such stents would need to be flexible within the cerebral vasculature and consistently remain open over long periods of time.

Embolic Agents Endovascular management of cerebral aneurysms and arteriovenous malformations also will benefit from the development of embolic agents. These agents, which likely will include liquid polymers that solidify within aneurysms, potentially could diminish recanalization rates as well as obliterate the aneurysm more uniformly. For arteriovenous malformations, embolic agents could simplify and reduce risk associated with treatment. Currently, adhesive embolization requires the catheterization and injection of multiple arterial pedicles.

A potential complication of this treatment is adhesion of the catheter to the vessel wall. An agent that would not bind the catheter to the vessel wall and that could be flushed completely from within the catheter would allow multiple arterial pedicles to be embolized with just one catheter.

Single Coils Another technical advancement would be a single coil that could be detached within an aneurysm at any length. Current coil technology requires deployment of multiple coils of varying lengths within the aneurysm. A deployment system that would allow a single strand of coil to be detached at the length where the aneurysm is completely obliterated would reduce the complications associated with the current labor-intensive, multiple-coil techniques.

Improving Safety, Revolutionizing Future Treatment

The treatment and prevention of cerebrovascular accidents are other realms in which the advancement of endovascular techniques will play a decisive role. With the recent federal approval of a stent device for the treatment of carotid stenosis, the management of occlusive brachiocephalic disease will become the focus of heated debate. Endovascular techniques carry the obvious allure of minimal invasiveness and shorter recovery times though their efficacy will only be borne out through currently ongoing prospective trials. Nonetheless, the development of drug-eluting stents and a new generation of antiplatelet agents and thrombolytics foreshadow a promising future for endovascular techniques in the treatment of this common pathologic entity.

While this technology is anticipated in the near future, on the more distant horizon is the manufacture of catheters with microscopic machines on their ends that could occlude aneurysms and arteriovenous malformations, and open stenotic vessels from within. This brave new world of endovascular management would likely include robotically driven catheters or perhaps, in the near future, magnetically driven catheters. Such technology would not only simplify catheterization but also would increase security of catheter placement within the target lesion itself.

The salient feature of endovascular neurosurgery is that it is continually developing at a rapid pace. This vigorous advancement will continue to revolutionize the treatment of cerebrovascular disorders. ■

Felipe C. Albuquerque, MD, is assistant director of endovascular neurosurgery at the Barrow Neurological Institute in Phoenix, Ariz.

Send your ideas for NS Innovations to William T. Couldwell, MD, NS Innovations editor, at william.couldwell@hsc.utah.edu.

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



AANS LEADERSHIP 2004-2005

OFFICERS

Robert A. Ratcheson, MD, *president*
Fremont P. Wirth, MD, *president-elect*
Charles J. Hodge Jr., MD, *vice-president*
Jon H. Robertson, MD, *secretary*
James R. Bean, MD, *treasurer*
A. John Popp, MD, *past president*

DIRECTORS AT LARGE

Christopher M. Loftus, MD
Paul C. McCormick, MD
James T. Rutka, MD
Warren R. Selman, MD
Troy M. Tippet, MD

REGIONAL DIRECTORS

Gene H. Barnett, MD
Paul E. Spurgas, MD
Frederick D. Todd II, MD
Clarence B. Watridge, MD

EX-OFFICIO

Frederick A. Boop, MD
G. Rees Cosgrove, MD
Dennis E. McDonnell, MD
Mark R. McLaughlin, MD
Andrew D. Parent, MD
Gerald E. Rodts Jr., MD
Oren Sagher, MD
Raymond Sawaya, MD
Philip E. Stieg, MD
Alex B. Valadka, MD

LIAISONS

Deborah L. Benzil, MD
Mark G. Hamilton, MD
Nelson M. Oyesiku, MD

AANS EXECUTIVE OFFICE

5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847) 378-0500
(888) 566-AANS
Fax: (847) 378-0600
E-mail: info@AANS.org
Web site: www.AANS.org

Thomas A. Marshall, *executive director*
Ronald W. Engelbreit, CPA,
deputy executive director
Susan M. Eget, *associate executive
director-governance*
Joni L. Shulman, *associate executive
director-education*

DEPARTMENTS

Communications, Betsy van Die
Development, Michele S. Gregory
Information Services, Kenneth L. Nolan
Marketing, Kathleen T. Craig
Meeting Services, Lisa M. Sykes, CMP
Member Services, Chris A. Philips

AANS/CNS WASHINGTON OFFICE

725 15th Street, NW, Suite 800
Washington, DC 20005
Phone: (202) 628-2072
Fax: (202) 628-5264
Web site: www.AANS.org/legislative/
aans/washington_c.asp

EVENTS

Calendar of Neurosurgical Events

2005 AANS Annual Meeting

April 16–21, 2005
New Orleans, La.
(888) 566-2267
www.AANS.org

**9th Intl. Symposium:
Live Instructional Non-Fusion
Spine Course**

May 3, 2005
New York, N.Y.
www.swiss-spine.ch

**2nd State of the Art in Chronic
Low Back Pain**

May 10–13, 2005
Bordrum, Turkey
www.vitalmedbodrum.com

**Total Patient Care
for Brain & Spine Cancer**

May 11, 2005
Southfield, Mich.
(313) 916-8354

Society of Neurological Surgeons⁺

May 21–24, 2005
Menlo Park, Calif.
(608) 263-0170

ASNR 43rd Annual Meeting

May 21–27, 2005
Toronto, Canada
(630) 574-0220
www.asnr.org

**Exploring Shoulder Dystocia &
Brachial Plexus Injury:
Multidisciplinary Perspectives**

May 22–23, 2005
Baltimore, Md.
(410) 955-2959
www.hopkinscme.net

**87th Annual Meeting
of The Endocrine Society**

June 4–7, 2005
San Diego, Calif.
(301) 941-0200
www.endo-society.org

Neurosurgical Society of America⁺

June 5–8, 2005
Orlando, Fla.
(307) 266-4000

**Rocky Mountain
Neurosurgical Society⁺**

June 5–8, 2005
(303) 783-5118

**Canadian Congress
of Neurological Sciences**

June 14–18, 2005
Ottawa, Canada
(403) 229-9544
www.ccns.org

**13th World Congress
of Neurological Surgery**

June 19–24, 2005
Marrakesh, Morocco
www.wfns.org

**CARS 2005: Computer
Assisted Radiology and Surgery**

June 22–25, 2005
Berlin, Germany
www.cars-int.org

**Pa. Neurosurgical Society
Annual Meeting**

July 15–16, 2005
Hershey, Pa.
(717) 558-7750

**Modern Treatment of Tumors of the
Nervous System**

July 23–29, 2005
Merida, Mexico
www.xviiicmcn.org

**11th Annual Montana Neurosurgery
Symposium⁺**

July 31–Aug. 4, 2005
Pray, Mont.
(406) 329-5733

Hydrocephalus 2005

Aug. 15–17, 2005
Queenstown, New Zealand
www.madeline.org

**7th Annual Interventional
Neuroradiology Symposium**

Sept. 9–10, 2005
Toronto, Canada
(416) 978-2719
www.cme.utoronto.ca

**33rd International Society for
Pediatric Neurosurgery**

Sept. 11–15, 2005
Vancouver, Canada
(604) 681-5226
www.ispn.org

AAEM Annual Meeting

Sept. 21–24, 2005
Monterey, Calif.
(507) 288-0100
www.aanem.org/meetings/meet-
ings.cfm

2nd Annual Practical Critical Care

Sept. 22–23, 2005
Charlottesville, Va,
(434) 243-5703
www.cmevillage.com

**Advances in Biology & Treatment of
Malignant Brain Gliomas**

Sept. 23–24, 2005
Rome, Italy
www.neurosciences2005.org

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

2005 AANS Courses

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

■ **Managing Coding & Reimbursement Challenges in Neurosurgery**

May 20–21, 2005San Francisco, Calif.
Aug. 26–27, 2005Chicago, Ill.
Sept. 16–17, 2005 .Nashville, Tenn. (Advanced)
Dec. 2–3, 2005Washington, D.C.

■ **Neurosurgery Review by Case Management: Oral Board Preparation**

May 22-24, 2005St. Louis, Mo.
Nov. 6-8, 2005Houston, Texas

■ **Neurosurgery Practice Management: Improving the Financial Health of Your Practice**

May 22, 2005San Francisco, Calif.
Sept. 18, 2005Nashville, Tenn.

■ **Anatomy & Terminology**

Aug. 25, 2005Chicago, Ill.