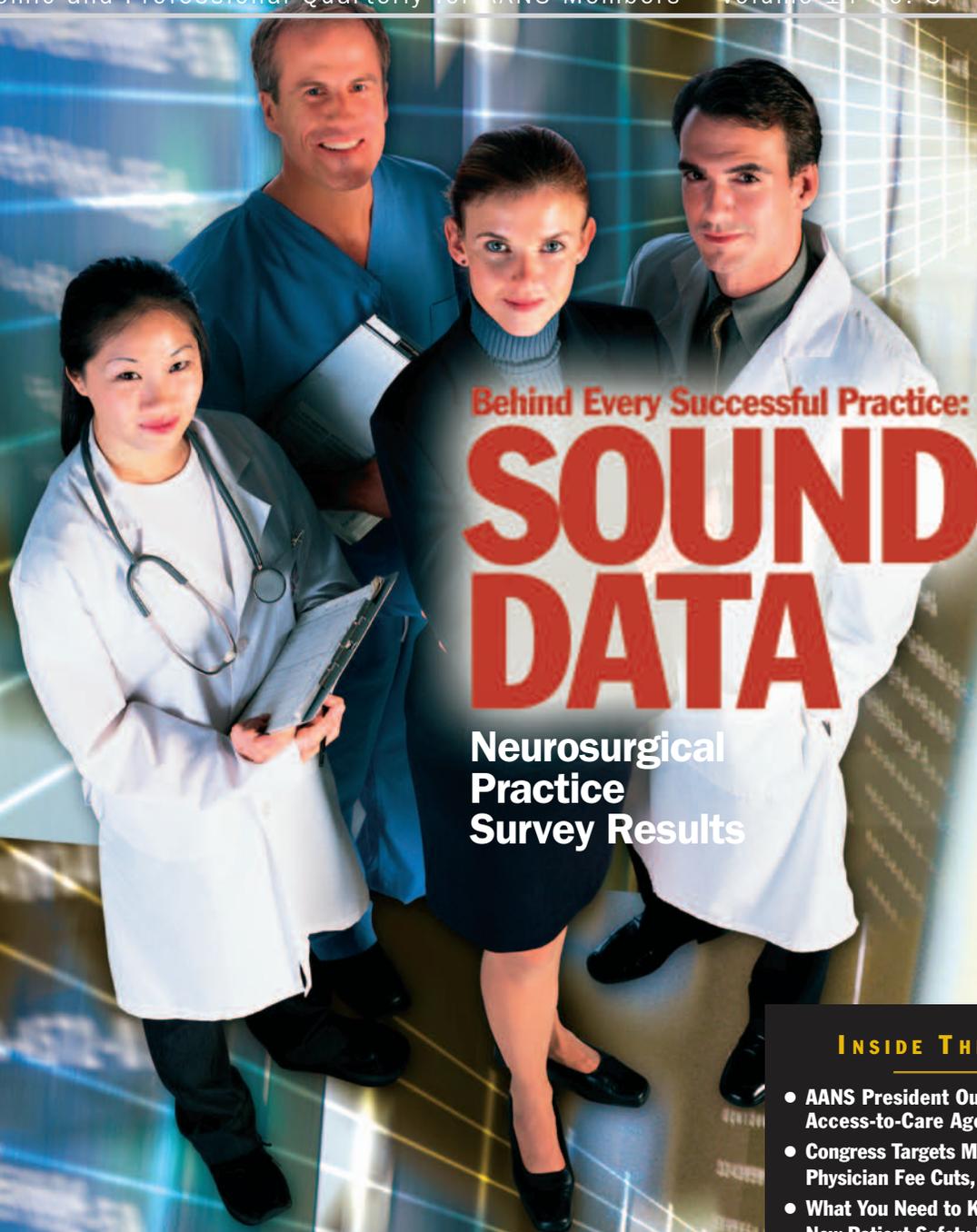


AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS BULLETIN

The Socioeconomic and Professional Quarterly for AANS Members • Volume 14 No. 3 • Fall 2005



Behind Every Successful Practice:

SOUND DATA

Neurosurgical
Practice
Survey Results

INSIDE THIS ISSUE

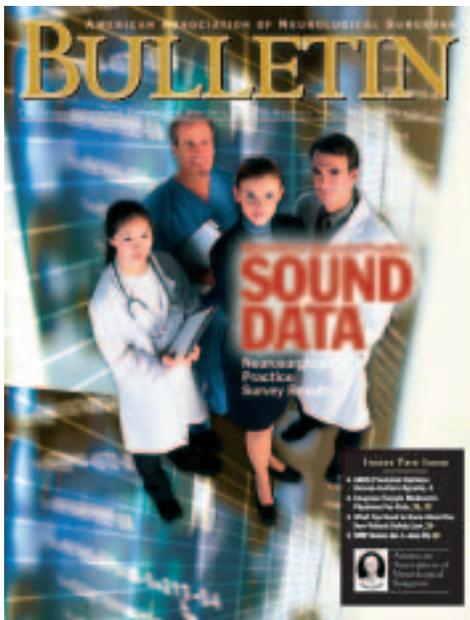
- AANS President Outlines Access-to-Care Agenda, **6**
- Congress Targets Medicare's Physician Fee Cuts, **26, 32**
- What You Need to Know About the New Patient Safety Law, **30**
- NREF Donors Jan. 1–June 30, **20**



American
Association of
Neurological
Surgeons

CONTENTS

VOLUME 14 NO. 3



ON THE COVER

10 | Behind Every Successful Practice: Sound Data
Results of the first NERVES Neurosurgery Practice Annual Survey are released.

Manda J. Seaver

PRESIDENT'S MESSAGE

6 | AANS Access-to-Care Agenda
Liability reform, reimbursement, and workforce top neurosurgery's concerns.

Fremont P. Wirth, MD

FEATURES

17 | AANS Bulletin Spurs Research
Peer-Reviewed papers will deepen the pool of socioeconomic data.

Manda J. Seaver

40 | Claim Credit the Easy Way
Convenient self-report CME form will debut at the 2006 AANS Annual Meeting.

Manda J. Seaver

42 | Online Marketplace Looks and Feels Brand-New
Secure ordering and ease of use are among refurbished Web site's expanded features.

Kathleen T. Craig

NEWS AND EVENTS

8 | Newsline: From the Hill
U.S. House passes medical liability reform legislation.

9 | Newsline: Neuro News
AANS assists hurricane-affected members and residency programs in the Gulf Coast.

37 | News.org
AANS offers Practical Reviews in Neurosurgery.

44 | Calendar of Neurosurgical Events
AANS/CNS Section on Pediatric Neurological Surgery Annual Meeting slated for Nov. 29–Dec. 2 in Orlando, Fla.

OPINION

16 | Personal Perspective
AANS *Bulletin's* momentum continues: New editor considers peer review, practice survey impact.

William T. Couldwell, MD

CONTENTS

DEPARTMENTS

28 | Bookshelf

“Thin-slicing” technique allows evaluation in the blink of an eye.

Gary Vander Ark, MD

29 | Coding Corner

Recommendations for stereotactic radiosurgery codes receive AANS/CNS Washington Committee’s approval.

Gregory J. Przybylski, MD

38 | Computer Ease

Smartphones can be a smart choice.

K. Michael Webb, MD

32 | CSNS Report

Summer legislation promotes pay for performance.

Fernando G. Diaz, MD

34 | Education

New AANS Resident Mentoring Program benefits residents, neurosurgery.

Deborah L. Benzil, MD

36 | Governance

AANS voters approve three bylaws amendments.

Susan M. Eget

21 | NREF

NREF investigator moves cancer treatment ahead.

Robert L. Martuza, MD

30 | Patient Safety

What do neurosurgeons need to know about the new patient safety law?

Alexander Mason, MD

23 | Residents’ Forum

Information is essential for a sound financial game plan.

Michael A. Sheinberg, MD, and Kelly Trevethan, CIMA

19 | Risk Management

Million-dollar verdict hinges on informed consent’s “reasonable patient” standard.

Michael A. Chabraja, JD

25 | Timeline

Medical records, first recorded on clay tablets, ensure that patients and physicians get what they deserve.

Michael Schulder, MD

26 | Washington Update

Medicare’s SGR overhaul likely will feature pay for performance.

Barbara Peck, 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.

William T. Couldwell, 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. Boulous, MD

Lawrence S. Chin, MD

Fernando G. Diaz, MD

David F. Jimenez, MD

Patrick W. McCormick, MD

Katie O. Orrico, JD

Mick J. Perez-Cruet, MD

A. John Popp, MD

Gregory J. Przybylski, MD

Michael Schulder, MD

Gary D. Vander Ark, MD

Monica C. Wehby, MD

Richard N. Wohns, MD

DEPARTMENT EDITORS AND CORRESPONDENTS

Deborah L. Benzil, MD (Education); Larry Chin, MD (Residents’ Forum); Fernando Diaz, MD (CSNS Report); Alan S. Boulous, MD (Computer Ease); William T. Couldwell, MD (NS Innovations); Nick Green (Practice Management); David F. Jimenez, MD, Monica Wehby, MD (Risk Management); Katie O. Orrico, JD (Washington Update); Gregory J. Przybylski, MD (Coding Corner); Michael Schulder, MD (Timeline); 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, hypothesis-driven 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.

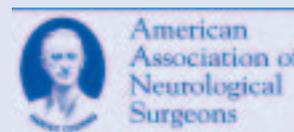
PUBLICATION INFORMATION

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, a 501(c)(6) organization, 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.



AANS Access-to-Care Agenda

Liability Reform, Reimbursement, Workforce Neurosurgery's Top Concerns

I am pleased to report that as the American Association of Neurological Surgeons approaches the Thanksgiving holiday, our organization is in fine shape to address the challenges ahead. The final numbers are in for the fiscal year ending June 30, and thanks to a successful meeting, excellent management of our journals, skillful cost control by our executive director and staff with able direction of our treasurer, and the generous support of our corporate partners, the AANS is in a strong financial position.

Operating from a position of organizational strength allows us to enhance activities that support the AANS' leadership role in the multitude of issues affecting neurosurgery. We as individual neurosurgeons also need to become much more involved in many areas. If the AANS is to succeed in influencing these issues, your individual help will be essential.

Access to neurosurgical care will in all probability become a problem for many of our patients in the coming years unless we can positively influence three very difficult issues: medical liability reform, physician reimbursement and neurosurgical workforce efficiency. Successfully influencing the resolution of any one of these issues by itself is a daunting task, but all three must be addressed simultaneously. I would like to update you on our progress and future plans with respect to these concerns.

Optimizing Support for Medical Liability Reform

This past year Neurosurgeons to Preserve Health Care Access, under the able leadership of John Popp, MD, contributed \$1 million to Doctors for Medical Liability Reform. You may recall that the successes of the DMLR's Protect Patients Now public education campaign were delineated in the Spring 2005 issue of the *Bulletin*.

To capitalize on the DMLR campaign's successes and to optimize neurosurgery's support for federal medical liability reform, this summer the AANS organized a new political action committee known as AANSPAC. This new PAC, which will focus on promoting the election to the U.S. Congress of candidates who support medical liability reform, is now fully operational

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



under the leadership of Chair Gary Bloomgarden, MD, Vice-Chair Lyal Leibrock, MD, and Treasurer Jim Bean, MD. The AANSPAC is aligned with your elected AANS officers and directors to assure that it will be responsive to the needs of neurosurgery as you define them. Most of the former PAC's board members form the board of AANSPAC, and Katie Orrico continues her effective and energetic efforts on behalf of neurosurgery in our Washington office. The AANS/CNS Washington Committee and the Council of State Neurosurgical Societies are represented on the AANSPAC board, as is DMLR.

Although the new PAC will not be able to accept contributions from corporations or university departments, a major benefit of the new structure is the streamlined process for making contributions. Because contributions can be solicited from voting or dues paying AANS members with the dues invoice, donating to AANSPAC will be a simple and efficient process.

However, there remains a major problem with our efforts for liability reform. In the first six months of 2005, only 392 members—about 6 percent of AANS membership—contributed to medical liability reform via NPHCA. I find this to be an astonishingly poor response to what is one of our most pressing issues! We have to do much better if we are to have an impact in Washington. Members of other associations such as trial lawyers and chiropractors support their legislative agendas almost universally. Additional information about AANSPAC and NPHCA accompanies this article.

Influencing Physician Reimbursement

If liability reform seems challenging, influencing physician reimbursement is even more difficult because of the budgetary constraints placed on Medicare, the federal program that so powerfully influences all reimbursement issues. Neurosurgery, along with many other specialties, faces a 4.3 percent cut in fees in the coming months unless the sustainable growth rate formula used in the calculation of Medicare reimbursement is replaced by a more realistic formula that recognizes medical economic conditions. Legislation addressing this issue has been proposed in both the U.S. House of Representatives and the Senate. This legislation deserves your scrutiny. You should also be aware of the pay-for-performance movement, which is supported by both the private sector and the government. This so-called P4P initiative is based on the laudable concept that good medical care should be rewarded. However, how this concept will be measured and applied to procedural physicians such as surgeons has not been worked out. There are models in other countries, and demonstration projects are underway in this country. It appears that implementation of some form of this con-

cept is inevitable. The AANS currently is working with the American College of Surgeons and the American Medical Association to ensure that the interests of neurosurgeons and their patients are protected through the use of appropriate quality measures to evaluate care.

Evidence suggests that patients' access to care already is being limited by declining reimbursement from Medicare and Medicaid. Recent data reported in the Medical Association of Georgia Journal indicates that access to care has decreased in Georgia. In 2000, 85.4 percent of Georgia physicians were accepting Medicaid patients, and in 2004 only 77.3 percent were doing so. For Medicare the numbers were almost the same, down from 85.4 percent in 2000, to 78.3 percent in 2004. This is a disturbing trend and I doubt it is unique to Georgia. The Washington Committee and our legislative liaisons need our individual support. We need to contact our senators and representatives on these issues. It is our obligation to become informed and involved. No one else will do it for us or for our patients.

Assessing the Neurosurgical Workforce

The third issue we face as neurosurgeons is a decreasing workforce. Given the growth

of our population, increasing longevity and the increasing number of surgical remedies we can offer, neurosurgery would be challenged if its numbers were static. That, however, appears not to be the case. Again, data from Georgia reveal that neurosurgeons per 100,000 population have fallen from 1.59 in 1992 to 1.39 in 2002. Reliable national data are more difficult to obtain, but in other areas of the country this decline in the numbers of neurosurgeons appears to be the case as well. Indeed, Tom Origitano, MD, writing in the Summer 2005 issue of the *Bulletin*, reported rates of 1 neurosurgeon per 350,000 population for cranial cases in the Chicago area. The recent Council on Graduate Medical Education's 16th Report cites several possible causes for the expected shortage of physicians, including early retirement, "quality of life" issues exemplified by physicians who elect to work shorter hours or take more time off, and shorter resident work hours, which potentially alter expectations for work hours in the future. As I am sure you are also aware, many neurosurgeons are restricting their privileges, most often giving up intracranial work, with the expectation of decreased call responsibilities and decreased liability exposure. The further

restriction this imposes on access to care for patients is obvious. Interestingly, if the data from The Doctor's Company summarized by Richard Wohms, MD, in the Summer 2005 issue of the *Bulletin* is correct, rather than decreasing liability exposure, forgoing intracranial procedures in favor of spinal procedures actually may increase it.

These problems have not escaped the attention of our general surgery colleagues. The development of a "Board of Acute Surgery" has been suggested as one means of alleviating the shortage of specialty physicians available for emergency care. As inappropriate as this may seem, a solution will have to be found for the increasing societal need for neurosurgical services. I for one feel that our patients will suffer if we relegate their care to physicians who are not fully trained in the surgical management of the nervous system. Neurosurgery also will suffer if we fail to develop a system of neurosurgical care delivery that does not disproportionately overburden our academic and other large neurosurgical centers with an excess of high acuity, poorly reimbursed patients. To address this issue, the AANS has formed a task force of respected neurosurgical leaders representing a broad cross section of our specialty to study possible solutions for this vexing dilemma.

In the coming months I anticipate that many of you will be called upon to contribute some of your time, energy and intellect by responding to surveys that seek new information to broaden our database of neurosurgical practice, needs and expectations. For example, your participation in two surveys this fall, the second annual NERVES Neurosurgery Practice Survey (see cover story) and the AANS census (www.MyAANS.org) will provide important information about the neurosurgical workforce and how neurosurgeons are practicing today. Your support and assistance with these projects and others will be invaluable as we address the many important issues affecting neurosurgery. ■

Supporting Medical Liability Reform

■ **AANSPAC—American Association of Neurological Surgeons Political Action Committee** promotes the election of candidates who support medical liability reform.

AANSPAC
(202) 628-2072
www.aans.org/legislative

By law, AANSPAC may accept personal contributions to a maximum of \$5,000 per year from AANS members in the United States who pay dues or have voting

privileges: Active, Active Provisional, Lifetime, Associate and Allied members. AANSPAC returns contributions that do not meet these guidelines.

■ **NPHCA—Neurosurgeons to Preserve Health Care Access** (of the AANS and the CNS) provides public information and education on medical liability reform.

NPHCA
(202) 628-2072
www.neuros2preservecare.org

NEWSLINE

News Members Trends Legislation

FROM THE HILL

LETTERS DETAIL AANS/CNS MEDICARE RECOMMENDATIONS

Medicare's physician payment system and pay-for-performance proposals were the subject of two letters, dated June 9, from the AANS and the CNS to the U.S. Congress. Links to the letters are available at www.aans.org/legislative/aans/medicare_concerns.asp. The Washington Update, page 26, details legislation related to these topics.

Frequent updates to legislative news are available in the Legislative Activities area of www.AANS.org.

- **House Passes Medical Liability Reform Legislation** On July 28, the U.S. House of Representatives passed H.R. 5, the HEALTH Act of 2005, by a vote of 230 to 194. Introduced by Phil Gingrey, R-Ga., and Lamar Smith, R-Texas, the bill is identical to the HEALTH Act that passed the House twice during the 108th Congress. Patterned after the California MICRA legislation, the bill includes: unrestricted awards for economic damages; a \$250,000 cap on noneconomic damages ("pain and suffering"); caps on punitive damages at the greater of \$250,000 or twice economic damages; limits on attorneys' contingency fees; joint and several liability reforms; no double recovery of damages; and periodic payment of damages over time. A similar version of the HEALTH Act, S. 354, was introduced earlier this year in the Senate by John Ensign, R-Nev. Senate leadership has not yet determined a time frame for action on this or other medical liability reform legislation, although the issue remains a high priority of Majority Leader Bill Frist, R-Tenn., and others.
- **DMLR Launches Campaign's Second Phase** Doctors for Medical Liability Reform unveiled the second phase of its campaign for federal medical liability reform on Oct. 6. The campaign kick-off featured a roundtable with members of the national media in Washington, D.C., and organized radio media tours in two of the DMLR target states, Washington and Maryland. In addition, DMLR released the first animated advocacy messages to the media, policymakers and its grassroots network and also initiated targeted online advertising. Throughout the remainder of 2005, DMLR plans to release additional animated messages and mini-documentaries about the medical liability crisis and to seek neurosurgeons who will participate in its grassroots advocacy and public education campaign. More details about the Protect Patients Now initiative are available at www.protectpatientsnow.org. The AANS and the CNS are members of DMLR through their advocacy organization, Neurosurgeons to Preserve Health Care Access. Organized neurosurgery has raised nearly \$900,000 to fund its medical liability campaign.
- **CMS Issues Proposed 2006 Medicare Physician Fee Schedule Regulation** On Aug. 1, the Centers for Medicare and Medicaid Services published the proposed 2006 Medicare physician fee schedule regulation. If adopted as proposed, neurosurgeons' Medicare reimbursement will be cut by 4.6 percent in 2006. The principal cause of the payment reductions is the 4.3 percent cut in the conversion factor, which is mandated by the sustainable growth rate formula. In addition, the CMS is proposing a change in the formula for calculating physicians' practice expenses. The AANS and CNS submitted comments to the CMS urging that: Costs of physician-administered drugs should be retroactively eliminated from the physician expenditure target; practice expense formula changes should be delayed for at least one year; and further refinements to the malpractice expense formula are needed to better reflect the true costs of neurosurgeons' medical liability premiums. The final fee schedule regulation will be published on or about Nov. 1.
- **AANS and CNS Urge Medicare to Postpone Decision on Coverage of Artificial Discs** On Aug. 16, the Centers for Medicare and Medicaid Services issued a request for comments on a proposed Medicare National Coverage Determination for lumbar artificial disc replacement. The AANS and CNS responded in a letter that states, in part, that "it is premature for CMS to render a definitive national coverage determination for this procedure. We fear that if the agency does implement a non-coverage decision, many patients—both Medicare beneficiaries and others—who would benefit from this treatment may suffer unnecessarily if this surgical option is not available to them." The letter also notes that denial of coverage for artificial disc surgery would negatively impact development of the technology and refinement of its indications. The CMS is expected to publish its proposed decision memorandum on Feb. 16.

NEURO NEWS

DYNAMIC PROTEIN DUO DISINTEGRATES LARGE GBMS

A combination of RAdTK, a protein that kills cancer cells, and RAdFit3L, which stimulates immune or dendritic cells in the brain, completely eliminated large glioblastoma multiforme tumors in laboratory rats. The gene therapy study is published in the Aug. 15 issue of *Cancer Research*.

- **AANS Assists Hurricane-Affected Members and Residency Programs in the Gulf Coast** In the wake of Hurricane Katrina, the AANS moved quickly to reach members. In a special announcement on Sept. 1, AANS President Fremont P. Wirth, MD, encouraged all AANS members to offer local relief agencies in-kind assistance and financial support. “The AANS is contacting local members and residency programs to determine what assistance we can provide,” he stated. The AANS launched the Hurricane Katrina Web page to offer a resource compendium for doctors, patients and displaced individuals. Accessible from www.AANS.org, the page offers links to a variety of medical resources and charitable organizations and allows the AANS to communicate timely news regarding displaced members and residency programs. The AANS also is matching Gulf Coast members who are interested in locum tenens positions with practices that are offering temporary positions. Nearly 6,000 doctors who care for patients in 10 counties and parishes in Louisiana and Mississippi were displaced by Hurricane Katrina, according to a University of North Carolina School of Public Health study reported by the Associated Press. The AANS estimates that hurricanes Katrina and Rita affected 250 of its members in the Gulf Coast area.
- **New Coma Scale Developed: The FOUR Score** The “Full Outline of UnResponsiveness” score, known as the FOUR score, was developed by researchers at the Mayo Clinic in Rochester, Minn., to address Glasgow coma scale shortcomings that they identified as the failure to assess the verbal score in intubated patients and the inability to test brain stem reflexes. Evaluators using the FOUR score assign a value of zero to four—with zero indicating nonfunctioning and four, normal functioning—in each of four categories: eye, motor, brain stem and respiratory function. According to researchers, the FOUR score provides greater neurological detail than the GCS, recognizes locked-in syndrome, evaluates brain stem reflexes, and considers brain herniation and breathing as indicators of coma depth. The study, published in the October issue of the *Annals of Neurology*, tested the FOUR score with 120 intensive care unit patients and found good to excellent agreement among raters. “A coma scoring system like the FOUR score makes better doctors,” stated principal author Eelco Wijdicks, MD. “It helps the doctor know what state the patient is in and what the prognosis is [in order] to communicate better with the family.”
- **CT Imaging, Not Plain X-rays, Needed to Detect Secondary Spinal Injuries** X-rays failed to detect secondary injuries in 81 of 224 patients with cervical spine injuries diagnosed on plain film radiography, according to a national study published in the September issue of the *Annals of Emergency Medicine*. Approximately one fourth of the secondary injuries occurred in another part of the cervical spine, suggesting to authors that at least some of the patients had sustained two separate spinal injuries. The authors concluded that patients with any evidence of cervical spine injury, including those with cervical spine injuries previously considered to be at low risk for secondary injuries, should undergo computed tomographic imaging of the entire cervical spine.
- **New Guideline Calls Carotid Endarterectomy an Effective Therapy for Some Patients** A clinical practice guideline published in the Sept. 27 issue of *Neurology* found that there is scientific evidence to support the use of carotid endarterectomy to reduce future stroke risk. Authors reviewed literature from 1990 through 2004 and found that carotid endarterectomy is effective for patients with severe stenosis and recent symptoms of stroke or transient ischemic attack, and that it may also be considered for patients with moderate stenosis and recent symptoms of stroke. The guideline is available at www.aan.com/professionals/practice/guideline/index.cfm.

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



Behind Every Successful Practice: **SOUND DATA**

Neurosurgical Practice Survey Results

MANDA J. SEAVER

No neurosurgeon would consider initiating a surgical procedure without first obtaining a wealth of diagnostic information for planning a prudent operative course. Similarly, neither neurosurgeons nor their practice managers would consider proceeding with fiscal planning in the absence of sound data that demonstrates how the practice has been performing as a business.

The significance of reliable practice data has increased as practices strive for success in a challenging climate of increasing cost and declining reimbursement. An individual neurosurgical practice's own performance indicators reveal important trends within the practice, but stop short of depicting the practice's position in a competitive marketplace.

NERVES Survey

A wealth of benchmarking data that allows neurosurgical practices to compare their own data to the consolidated data of practices across the country is the product of the inaugural NERVES Neurosurgery Practice Annual Survey. Results of the 2004 report, which is based on 2003 data, were presented to members of NERVES, the Neurosurgery Executives' Research and Education Society, at the group's annual meeting in April. Results are available in their entirety to NERVES members. Results additionally were presented to the leadership of the AANS, the Congress of Neurological Surgeons, and the Council of State Neurosurgical Societies, the organization that fostered establishment of NERVES as an independent entity.

"What had been missing before the NERVES practice survey was reliable neurosurgery-specific benchmarking data that allows com-

parison of a practice's performance with that of other neurosurgery practices," said Mark Mason, immediate past president of NERVES. "For practice administrators in search of areas where costs can still be trimmed and productivity maximized, this survey is a life preserver thrown just in time to help them blunt the effects of the anticipated deep Medicare cuts beginning in 2006."

Mason stressed that a primary aim of the annual survey is to reveal trends in neurosurgery. "Like a gold mine, the survey will pay off over time as the data is mined," he said. "The real treasure will be the trending data at five, 10, and 20 years, but the benchmarking data for even one year is worth its weight in gold."

Survey Design

The questionnaire, designed over the course of a year by practice administrators and neurosurgeons, was prepared in compliance with the requirements of the Department of Justice and the Office of the Inspector General. It was distributed in spreadsheet form via e-mail to NERVES members (approximately 225 practices) in July 2004. Fifty-four practices representing 359 neurosurgeons returned surveys, generating a strong response rate of 24 percent. Results were tabulated in fall 2004 and winter 2005 by the accountancy consulting firm of Heaton and Eadie, the only entity with access to the raw data.

The survey design features an eight-question "total practice" section that covers demographic data as well as accounts receivable and outside income information. A 19-question "relevant issues" section covers a range of miscellaneous yet important data, such as the number of practices that employ certified professional coders (43 percent) and the number of practices that use a picture archive and



FIGURE 1: Procedural Volume*Mean Number of Annual Neurosurgery Procedures Per FTE Provider by CPT Code*

CPT CODE	NO. of RESPONDENTS	MEAN NO. of PROCEDURES	GEOGRAPHIC REGION				GEOGRAPHIC CLASSIFICATION	
			EAST	SOUTH	MIDWEST	WEST	URBAN	RURAL
22554	291	41.29	49.18	53.43	32.48	39.09	41.29	0
22612	228	25.11	32.54	22.48	15.39	31.56	25.11	0
22630	179	23.03	29.10	20.45	11.90	23.53	23.03	0
61343	172	3.26	3.86	3.38	3.31	1.20	3.26	0
61510	272	10.67	13.18	8.00	8.67	12.95	10.67	0
61512	244	4.26	4.93	3.53	3.27	6.27	4.26	0
61548	142	4.45	5.41	2.77	4.86	4.42	4.45	0
61583	48	2.40	2.15	1.00	2.47	2.00	2.40	0
61600	37	1.49	1.80	1.00	1.25	1.00	1.49	0
61559	23	4.91	4.50	9.33	3.57	1.00	4.91	0
61584	48	2.29	2.23	1.33	2.39	0.00	2.29	0
61700	154	7.51	10.47	4.98	6.88	10.64	7.51	0
61793	86	30.53	45.29	15.32	31.31	70.33	30.53	0
62223	250	8.63	12.12	6.60	7.61	2.90	8.63	0
62230	197	6.43	7.44	4.37	5.95	3.64	6.43	0
63012	117	7.15	10.93	10.40	5.36	5.62	7.15	0
63020	199	9.50	10.23	6.88	12.46	10.67	9.50	0
63030	296	52.08	50.37	54.39	46.44	58.04	52.08	0
63042	271	16.71	24.47	14.09	14.44	13.44	16.71	0
63045	226	5.79	7.10	5.34	4.14	5.86	5.79	0
63047	289	34.48	38.61	39.66	29.04	45.08	34.48	0
63056	140	6.96	9.74	6.87	6.41	7.38	6.96	0
63200	55	4.24	4.17	4.09	4.73	0.00	4.24	0
64718	145	2.82	3.00	3.30	2.36	2.58	2.82	0
64721	189	12.22	17.44	17.64	4.49	14.4	12.22	0

Data Source: 2004 NERVES Neurosurgery Practice Annual Survey, 2003 Data

communication system known as PACS (41 percent). Other survey sections delve into full-time provider compensation and production, full-time support staff, and operating costs. The specialties of neurology, physiatry, pain management, interventional radiology and diagnostic radiology also were surveyed, but the relatively low response rate for each precluded use of that data in the report.

“In general the survey appears to validate what every neurosurgeon has presumed,” Mason said. “Work RVUs averaging more than 10,400 per neurosurgeon suggest that while they are working harder than ever, neurosurgeons are collecting less than 36 cents on every dollar, and almost 45 percent of what *is* collected goes to overhead.”

Productivity Measures

The NERVES survey addressed a number of productivity measures—

gross charges, gross collections, the number of new patient visits, the number of surgeries performed—and others, including relative value units, or RVUs. Work RVUs, the portion of Medicare’s resource-based relative value scale that computes the physician’s time, skill, and physical and mental effort required to perform a procedure, typically accounts for 52 percent of each service’s total relative value. The use of work RVUs as a standard productivity measure is gaining healthcare industry acceptance, according to healthcare consultant Max Reiboldt in the 2002 edition of *Financial Management of the Medical Practice*. Reiboldt holds that the RVU system is advantageous because “it eliminates the disparities in reimbursement for similar services from one third-party payer to another.”

In its annual practice survey, the American Group Management Association has tracked work RVUs for group practices since 1996.

According to the AMGA's 2005 Medical Group Compensation and Financial Survey, a trend toward the use of RVUs is evidenced: "Work RVUs are becoming the primary measure of a physician's productivity." The AMGA survey indicates that practices basing at least 50 percent of compensation on a work or financial measure prefer work RVUs as the standard measurement; work RVUs were the productivity measurement of choice of more than 40 percent of the AMGA survey's respondents.

The NERVES survey showed that 39 percent of neurosurgery practices use work RVUs for practice management or compensation purposes. The overall mean, or average, number of annual work RVUs per full-time provider reported by NERVES survey respondents was 10,479. The table below (Figure 2) illustrates productivity variations by geographic region and classification, practice type, size of practice and years in practice. Of note, those in academic practice fell between those in single specialty practice, who

FIGURE 2: Productivity Variations
Mean Number of Annual Neurosurgery Work RVUs Per FTE Provider

	NO. OF RESPONDENTS	MEAN WRVUS
OVERALL	184	10,479.09
GEOGRAPHIC REGION		
EAST	52	6,699.60
SOUTH	11	12,896.67
MIDWEST	112	11,715.19
WEST	9	13,978.78
GEOGRAPHIC CLASSIFICATION		
RURAL	0	0
URBAN	184	10,479.09
PRACTICE TYPE		
SINGLE SPECIALTY	86	9,300.82
MULTISPECIALTY	32	14,458.96
ACADEMIC	66	10,084.78
SIZE OF PRACTICE		
1-5 FTE PHYSICIANS	34	12,897.51
6-10 FTE PHYSICIANS	60	10,011.39
11-20 FTE PHYSICIANS	32	14,528.82
20+ FTE PHYSICIANS	58	7,310.89
YEARS IN PRACTICE		
1-5	49	9,971.54
6-15	51	11,912.88
15+	60	11,998.04

Data Source: 2004 NERVES Neurosurgery Practice Annual Survey, 2003 Data

FIGURE 3: Productivity By Specialty
Mean Number of Annual Neurosurgery Work RVUs Per FTE Provider—Academic Practice

SPECIALTY	MEAN WRVUS
Surgery (Cardiac)	11,345
Neurosurgery	10,414
Orthopedic Surgery (General)	9,098
Radiology (Diagnostic)	8,839
Surgery (Plastic)	8,315
Obstetrics/Gynecology	7,033
Ophthalmology	6,579
Neurology (General)	5,077
Pediatrics (General)	4,092
General Internal Medicine	3,787
Psychiatry	3,362

Data Source: Faculty Practice Solutions Center, 2005 Data

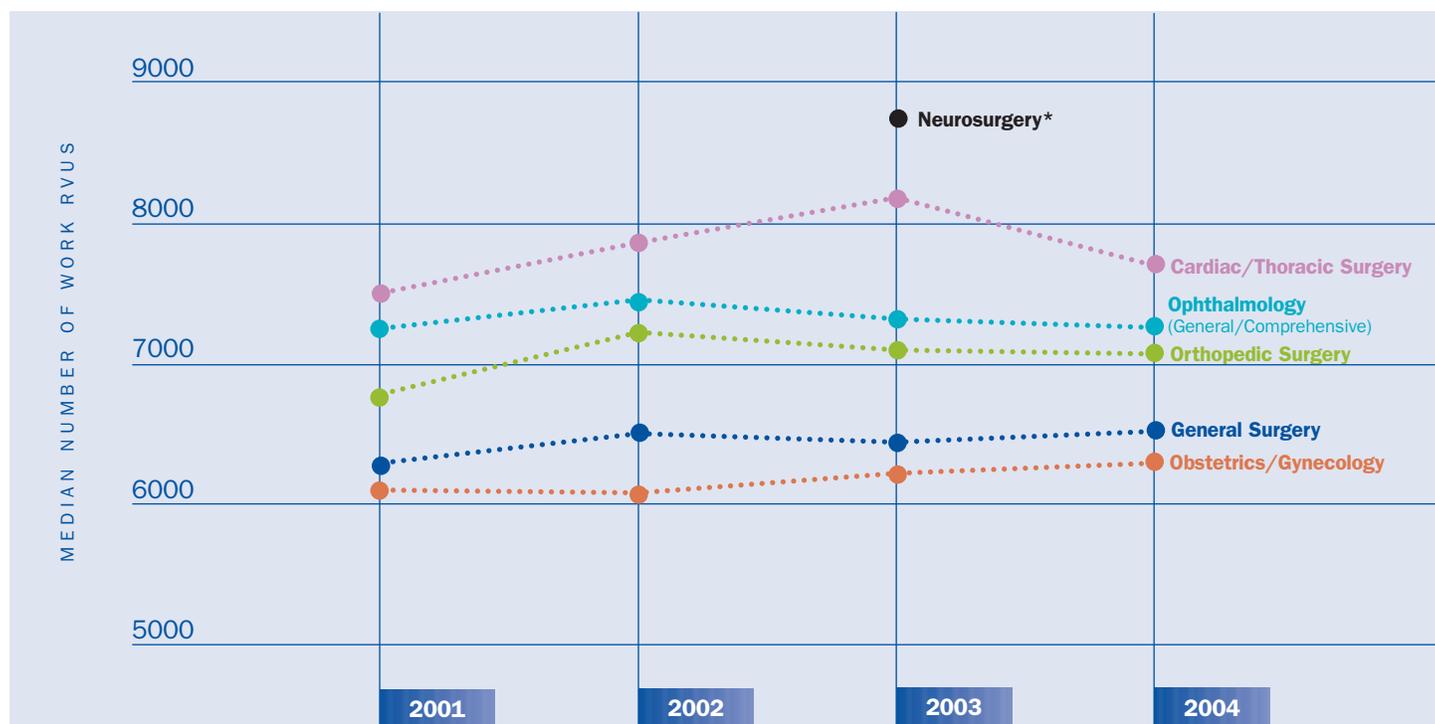
averaged 9,301 work RVUs per year, and those in multispecialty practice, who averaged 14,459 work RVUs per year. As might be expected, those in practice less than six years generated far fewer work RVUs than other neurosurgeons. The survey also showed wide variation between neurosurgeons in the east and those in the west: 6,700 compared with 13,979 work RVUs per year.

Neurosurgery's overall average figure of 10,479 work RVUs is very near the neurosurgery figure shown in the above table of 2005 academic practice data (Figure 3). This table compares work RVUs for select surgical specialties and shows neurosurgery at 10,414 annual work RVUs per full-time provider, ranking second only to cardiac surgery by this measure of productivity.

With only one year of data in hand for neurosurgery, trends in work RVUs are impossible to identify. However, a look at four years of data for other specialties suggests a trend toward an increase in work RVUs. The AMGA median figures from 2001 to 2004 for the specialties shown in the graph on page 14 (Figure 4) indicate an overall increase of about 4 percent in the work RVUs for group practices. Neurosurgery's overall median figure for

FIGURE 4: 2001–2004 Productivity Comparison

Median Number of Annual Work RVUs Per FTE for Selected Surgical Specialties—Group Practice



Data Sources: AMGA Medical Group Compensation and Financial Survey, 2005 Report; *2004 NERVES Neurosurgery Practice Annual Survey, 2003 Data

annual work RVUs per full-time provider in 2003 was 8,702; that is, when RVUs were ranked highest to lowest, half fell below 8,702 and half ranked above it.

Besides work RVUs, other productivity measures include the number of new patient visits per year and the surgical caseload. According to the NERVES survey, the average neurosurgeon saw 478 new patients per year, or about 10 new patients per week over 48 weeks. The number varied from an average of 300 to 800 new patients per year, with private practices averaging about 510 new referrals per year and academic neurosurgeons, about 370 per year.

There was wide variation in the surgical caseload per neurosurgeon. The NERVES survey reported an average figure of 335 cases per year, with caseload varying by neurosurgeon age and years in practice and peaking at 381 cases between six and 15 years of practice. There was a substantial difference in surgical caseload by practice type. Academic neurosurgeons averaged 239 cases annually, while those in single specialty practice averaged 345 cases, and those in multispecialty practice, 393 cases.

The table on page 12 (Figure 1) shows the mean number of annual neurosurgery procedures per full-time neurosurgeon by Current Procedural Terminology code.

Sources of Income

The NERVES survey reported revenue by location and by payer type. By location, 59 percent of income was attributed to inpatient

services, and 36 percent, to outpatient services. By payer type, only 31 percent of reimbursement came from government sources, while the vast majority, 67 percent, came from nongovernmental sources.

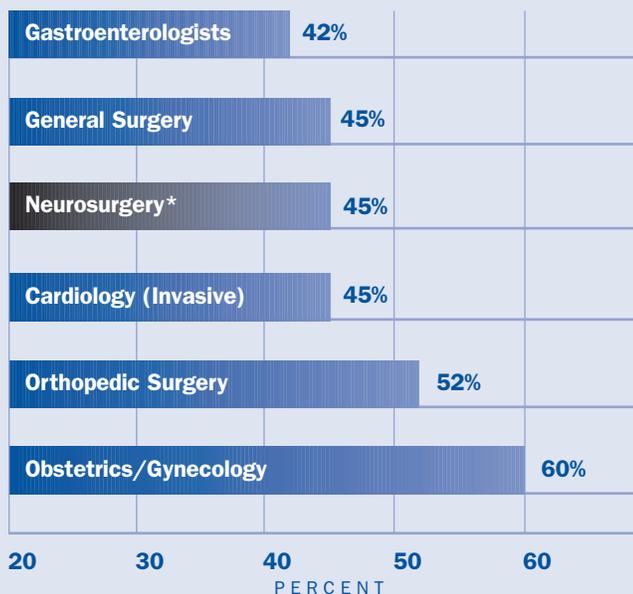
The survey also asked respondents to report income not based on RVUs. Outside sources, ranked from source of most income to source of least were: ambulatory services (although there were only two respondents), call coverage, emergency room coverage, management, research, directorship, and legal.

Providing ancillary services can be a convenience to patients and to the practice, as well as a source of additional practice income. NERVES survey results showed the top ranking service to be general X-ray, but even this service was offered by fewer than a quarter of respondents. After X-ray, magnetic resonance imaging and the grouped triad of electroencephalogram, electromyogram and Doppler ultrasound were each offered by 17 percent of practices. Fluoroscopy and physical therapy were each offered by 11 percent of respondents, while computed tomographic scanning, occupational therapy, neuro-ophthalmology and “other services” were offered by less than 10 percent of practices.

Cost and Profitability Measures

One indicator of practice profitability is the ratio of operating costs to collections. The NERVES survey put neurosurgery’s average operating cost at 45 percent of receipts, a figure that compares favorably with the 44 percent average practice expense component

FIGURE 5: Overhead Comparison
Mean Annual Operating Cost as a Percentage of Collections for Selected Specialties



Data Sources: Statistics: Medical and Dental Income and Expense Averages, 2004 Report Based on 2003 Data, in *Medical Economics*, Jan. 21, 2005; *2004 NERVES Neurosurgery Practice Annual Survey, 2003 Data

FIGURE 6: Overhead Allocation
Mean Annual Operating Cost as a Percentage of Collections for Neurosurgery

OPERATING COST	NUMBER OF RESPONDENTS	MEAN % OF COLLECTIONS
Total Support Staff Costs	49	21%
Malpractice Insurance Costs	49	7.50%
Total Operating Costs	50	45%

Total support staff costs were equally divided between clinical and administrative staff costs. Other operating costs amounted to less than 20 percent of collections.

Data Source: 2004 NERVES Neurosurgery Practice Annual Survey, 2003 Data

target of Medicare’s resource-based relative value scale, as well as with similar data for other specialties, as shown at left (Figure 5).

The relationship of operating costs to collections is further illustrated in the table below (Figure 6). The cost of support staff averaged 21 percent of receipts. The average number of support staff, including various administrative, technical and medical staff, was 4.5 people per full-time neurosurgeon. As shown in the table, the cost of malpractice insurance averaged 7.5 percent of receipts, approximately twice the amount allocated for the malpractice component of Medicare’s RBRVS.

The number of days a patient account is maintained in accounts receivable status is widely recognized as a critical measure of practice profitability. The longer an account is on the books, the more it depletes the working capital required to maintain the practice’s cash flow. The NERVES survey reported an overall average of 101 days of gross charges in accounts receivable, and a median figure of 63 days. These figures suggest that while a few accounts lengthen the mean considerably, neurosurgery’s true performance, demonstrated by the median number, is quite respectable. These figures also compare favorably with 2003 AMGA overall figures for group practices, with a mean of 95 A/R days and a median of 92 A/R days.

The NERVES survey additionally indicated two areas where significant practice expenditures were anticipated in the next 12 months: Nearly 60 percent of practices planned to recruit new providers in the next year, and almost 40 percent of practices planned to implement an electronic medical record in the next year, for which cost estimates can range from \$20,000 on a small scale to more than \$100,000 for larger clinics. The survey also indicated that 22 percent of practices already were using an EMR.

You Are Not Alone

This article represents a small but tantalizing sampling of the data available in the first NERVES Neurosurgery Practice Annual Survey. This first survey’s message clearly is that you are not alone. Colleagues across the country are facing similar challenges, and the benchmarking data in this 2004 report may reveal that your practice is meeting those challenges as well as most practices and perhaps better than you expected.

The NERVES Board of Directors already is anticipating the ability to start tracking trends in neurosurgical practice when the second practice survey is released next spring.

“The 2005 survey of practice data for 2004 will provide the comparative data needed to begin drawing conclusions about the economic state and future direction of neurosurgery,” said Mason. “This data will be a powerful weapon in the battle for economic justice, and NERVES and the NERVES survey are ready for service in that battle.”

The 2005 survey, underway this fall, is expected to be released at the NERVES annual meeting next April in San Francisco. NERVES information is available at www.nervesadmin.com. ■

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

AANS Bulletin's Momentum Continues

New Editor Considers Peer Review, Practice Survey Impact

With this issue, I assume the reins as editor of the AANS *Bulletin*. I am indebted to James Bean, MD, for his extraordinary efforts in this capacity, as witnessed by review of the recent issues published under his leadership.

An important initiative put forth by Dr. Bean and the Bulletin Advisory Board is the establishment of the peer-review portion of the *Bulletin*. The peer-review mechanism is intended to encourage submissions of hypothesis-driven research relating to issues that affect the practice of neurosurgery.

The *Bulletin* now formally solicits competitive, peer-reviewed manuscripts that are focused on socioeconomic issues in neurosurgery. Suggested topics for initial consideration include but are not limited to the impact on neurosurgical practice of resident work hour restrictions and physician extenders.

I am delighted that Mick Perez-Cruet, MD, is overseeing the peer-review process for this venture. The peer-reviewers include practicing neurosurgeons and legal and business consultants. Instructions for authors are available online at www.aans.org/bulletin/peer_review_authors.asp. Additional information on the peer-review process as well as how readers can participate in the *Bulletin* by writing a letter to the editor, submitting news items and ideas for articles, and more, is available on the *Bulletin's* Web page, www.aans.org/bulletin.

The current issue features a report on the first neurosurgery practice survey conducted by the Neurosurgery Executives' Resource Value and Education Society, better known as NERVES (www.nervesadmin.com). This initial socioeconomic survey provides important benchmarking data on neurosurgical provider productivity, operating costs and support staff.

The questionnaire was developed by the NERVES board and the data was analyzed



The *Bulletin's* home page: www.aans.org/bulletin.

by Heaton and Eadie, a private accounting firm. The data compiled are from 54 practices in the NERVES group (a total of 406 practitioners, 359 neurosurgeons). These practices vary by geographical representation, practice type and size, thus providing a broad view of neurosurgery.

Apart from verifying the overall collection rate as 35 percent of gross charges (an effective two-thirds write-off across all payers—a finding that presents a most bizarre business model, but which may provide some personal relief given the fact that most of us assume we are collecting less than our peers), perhaps the most profound observation in reviewing the data relates to productivity per neurosurgeon. The number of patients seen, operations performed (335 per year per neurosurgeon), and relative value units generated per neurosurgeon (roughly a mean of 10,500 per full-time employee) are all high, and I suspect the number is increasing in most practices. Very few specialties, with the exception of cardiac surgeons, are in the same ballpark. This indicates that neurosurgeons, who carry large clinical loads and an extraordinarily high malpractice burden, continue to work very hard.

Another interesting finding is that 45 percent of gross collections is allocated to practice expense, suggesting the sheer complexity of running a neurosurgical practice. Further, outpatient-related activities have been de-emphasized by many practitioners in the past in favor of collecting surgically related revenue. That evaluation and management collections are now 36 percent of revenue will be a revelation to many neuro-

surgeons and a message to all.

Most respondents said that they are planning on recruiting additional neurosurgeons over the next year, which attests to the demand for neurosurgical services. Considering that the clinical workload per neurosurgeon is high and more neurosurgeons are needed, it is apparent that there is a relative clinical supply-demand mismatch. From academic neurosurgery's perspective, there is more pressure to poach academic and teaching time in order to provide clinical care, which reduces one's ability to make fundamental contributions apart from direct clinical care. For those neurosurgeons in private practice, increasing clinical demands can make an already busy lifestyle unmanageable.

This NERVES survey is a snapshot in time. As an annual gauge, the survey will become more relevant over time as trending data becomes available. An increase in the number of practices contributing data will in turn increase validity, and I encourage all neurosurgical practices to participate. Development of this tool will empower us to define payer trends and improve practice management efficiency. ■

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

Bulletin Spurs Research

Peer-Reviewed Papers Will Deepen Pool of Socioeconomic Data

MANDA J. SEAVER

Federal medical liability reform, declining physician reimbursement, and a shrinking neurosurgical workforce are widely recognized as neurosurgery's top priority issues. Arguments that support change in these areas, whether addressed to members of a committee or to legislators in the statehouse or on Capitol Hill, can be strengthened significantly with reliable data.

In the clinical realm, evidence produced through specialty-specific, peer-reviewed research is the acknowledged standard on which to base decision making. Yet, for the important issues that affect both social and economic aspects of the neurosurgical profession, there has been a dearth of reliable data.

"In obtaining robust socioeconomic data, neurosurgery suffers from a triple threat," said William T. Couldwell, MD, editor of the *AANS Bulletin*. "To this point professionals have had little incentive to spend time on socioeconomic research, standards for such research have been applied unevenly, and a constant vehicle for publication of the resulting articles has been lacking."

Through establishment in late 2004 of a peer-review process for hypothesis-driven articles, the *AANS Bulletin* is changing that equation. As a magazine with a focus on both the social and economic aspects of neurosurgery, the *AANS Bulletin* is an appropriate and accessible vehicle for publication of rigorously researched articles exploring socioeconomic issues.

"The *Bulletin* is expressly charged with the exploration of topics related to the practice of neurosurgery," noted James R. Bean, MD, who as *Bulletin* editor shepherded the peer-review project launch last winter. "By adding a peer-reviewed article to each issue of the *Bulletin*, we are encouraging the focused research that will allow development of sound policy that impacts neurosurgical practice."

The *Bulletin* particularly invites submissions of research papers exploring workforce issues, patient safety, and practice management. There is an immediate need for papers on the impact of two topics on neurosurgical practice: resident work hour restrictions and the use of physician extenders.

Mick J. Perez-Cruet, MD, leads the peer-review panel of nine neurosurgeons, many of whom currently are or have been active in the Council of State Neurosurgical Societies, which is entirely focused on socioeconomic issues.

"These distinguished panelists all share an interest in socioeconomic topics and experience in neurosurgical leadership," said Dr. Perez-Cruet. "Panelists bring the weight of their experience to bear when evaluating quality of data, analysis and methods, and conclusions, as well as a paper's overall quality, originality, balance, writing, relevance to neurosurgery, and reader interest."

Papers undergo rapid review by panelists and occasionally by others who have expertise in the topic. Instructions for authors are available online at www.aans.org/bulletin/peer_review_authors.asp.

"Obtaining reliable data on socioeconomic topics relevant to

Peer-Review Panelists

Mick J. Perez-Cruet, MD, is director of minimally invasive spine surgery and spine program at the Michigan Head and Spine Institute in Southfield, Mich. He serves on the Executive Committee of the Council of State Neurological Societies.

Deborah L. Benzil, MD, is associate professor at New York Medical College, Valhalla, N.Y. She currently serves on the executive board of the Council of State Neurosurgical Societies.

William E. Bingaman Jr., MD, is head of epilepsy surgery in the Department of Neurological Surgery at the Cleveland Clinic Foundation, Cleveland, Ohio. He serves on the executive committees of the Congress of Neurological Surgeons and the Council of State Neurosurgical Societies.

Frederick A. Boop, MD, FACS, is associate professor in the Department of Neurosurgery at the University of Tennessee, Memphis. He is a past chair of the Council of State Neurosurgical Societies.

Fernando G. Diaz, MD, PhD, FACS, is a professor in the Department of Neurological Surgery at Wayne State University in Detroit, Mich. He is the current chair of the Council of State Neurosurgical Societies.

David F. Jimenez, MD, FACS, is professor and chairman of the Department of Neurosurgery at the University of Texas Health Science Center at San Antonio. He is a past chair of the Council of State Neurosurgical Societies.

Lyal G. Leibrock, MD, FACS, is a professor in the Department of Surgery as well as neurosurgery training program director at the University of Nebraska Medical Center. He is a past chair of the Council of State Neurosurgical Societies.

Mark E. Linskey, MD, is chair of the Department of Neurological Surgery at the University of California, Irvine, and co-director of the multidisciplinary Neuro-Oncology Program at the Chao Family Comprehensive Cancer Center at UCI Medical Center.

Richard N. Wohns, MD, MBA, is founder and president of South Sound Neurosurgery in the Puget Sound region and associate clinical professor of neurosurgery at the University of Washington. He is president of the Washington State Association of Neurological Surgeons and serves on the Executive Committee of the Council of State Neurosurgical Societies.

neurosurgery is crucial for our profession," said Dr. Couldwell. "Establishment of peer review in the *AANS Bulletin* has removed stout barriers to conducting and publishing important research, and I hope that this will prove a strong incentive for potential authors who are interested in exploring such topics." ■

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



Advertise in the *AANS Bulletin*



Call today to place your ad in neurosurgery's premier socioeconomic magazine created by neurosurgeons for neurosurgeons. AANS members surveyed in 2004 rated the *AANS Bulletin* a top member benefit and a leading predictor of overall satisfaction with their membership.

For details contact:

Bill Scully
Cunningham Associates
180 Old Tappan Road
Old Tappan, NJ 07675
Phone: (201) 767-4170
Fax: (201) 767-2784
bscully@cunnasso.com

Advertising information
is available at
www.aans.org/bulletin.

Meet the Reasonable Patient Standard

Million-Dollar Verdict Hinges on Informed Consent

A neurosurgeon must make numerous decisions during surgery, bringing to bear one's personal universe of education and experience. When a case does not proceed as expected, best medical practice—that is, proceeding with what one believes is in the best interest of the patient—may not equate with a safe legal course for the physician. In the following case, a neurosurgeon and his practice were introduced to the “reasonable patient standard” of informed consent.

The plaintiff, a 47-year-old laborer, felt intense pain in his hip and back while at work. At the hospital the plaintiff's symptoms suggested an acute left S1 radiculopathy with weakness in plantar flexion, loss of Achilles reflex, and severe radicular pain. A magnetic resonance image was taken and the treating neurosurgeon diagnosed a herniated disc at L5–S1 and recommended surgery.

The neurosurgeon performed a lumbar microdiscectomy the following day. During the course of the procedure, the neurosurgeon discovered that the disc at L5–S1 was not herniated. The neurosurgeon then explored underneath the disc and removed a piece of bone to expose a swollen S1 nerve root. Apparently of the belief that a tumor was the cause of the swelling, the neurosurgeon performed several small biopsies of the nerve root to send to a pathologist. The pathologist found the tissue to be healthy.

At Trial, Prior Consent's an Issue

The plaintiff sued the neurosurgeon's medical practice for malpractice. Notably, in an attempt to eliminate potential jury sympathy, the plaintiff's attorneys elected not to sue the neurosurgeon individually.

The plaintiff alleged that the neurosurgeon failed to conduct a proper examina-

tion and should not have operated and, further, that the neurosurgeon failed to obtain prior consent before performing the biopsies. The plaintiff claimed that as a direct result of the small biopsies, he sustained permanent and irreparable damage to the nerve root resulting in numbness and weakness in his right leg. He also claimed that his injuries left him disabled and unable to return to work. The plaintiff was earning \$30,000 a year and claimed a past wage loss of \$102,000 and a future wage loss of \$400,000. He also sought damages for pain and suffering.

Michael A. Chabreja, JD, is a partner with McGuireWoods LLP, in Chicago, Ill.



The plaintiff's expert opined at trial that the magnetic resonance image did not show a disc herniation at L5–S1, that the neurosurgeon failed to properly examine the plaintiff, and that the neurosurgeon should not have operated. He further asserted that the suspected nerve root abnormality was actually the normal ganglion portion of the nerve, thus demonstrating that the biopsies were unnecessary. The defense countered that it was reasonable to believe there was a tumor on the nerve root and, further, that the plaintiff's injuries were preexisting. The defense pointed to a 1997 incident where the plaintiff fell, landing on his back.

After deliberating just 45 minutes, the jury returned a verdict in favor of the plaintiff and awarded damages in the amount of \$1,077,000 (\$102,000 for past lost earnings; \$400,000 for future lost earnings; \$75,000

A threshold issue in this case was the performance of an unexpected procedure.

for past pain and suffering; and \$500,000 for future pain and suffering).

What Constitutes Complete Informed Consent?

The speed with which the jury returned its verdict highlights the importance of disclosing sufficient information to allow patients to make informed decisions concerning treatment. The doctrine of informed consent originates from the legal and ethical right patients have to direct what happens to their bodies, and from the ethical duty of physicians to involve patients in their own healthcare. Complete informed consent generally requires discussion of the:

- nature of the decision or procedure;
- reasonable alternatives to the proposed procedure;
- relevant risks, benefits and uncertainties related to each alternative;
- assessment of patient understanding; and
- patient's acceptance of the decision and/or procedure.

Informed consent cases often turn on one central issue: How much information is considered adequate? There are three different standards suggested in the pertinent literature and case law:

Continued on page 25

Creating Masters in Neurosurgery

NREF Supporters Jan. 1-June 30, 2005

The Executive Council of the AANS Neurosurgery Research and Education Foundation gratefully acknowledges the individuals, groups, corporations and members of the general public who generously supported the NREF between Jan. 1 and June 30, 2005.

We thank these donors for continuing to recognize the need for and understanding the importance of providing critical funding for many of the most promising neurosurgical studies being conducted today. These studies have set a high standard for research in the neuroscientific community by enhancing science and improving patient care.

The investment of these NREF supporters 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 over the past six months include:

Gifts of \$15,000 to \$50,000

DePuy Spine, a Johnson & Johnson Company
Medtronic Neurological

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

The Anspach Companies
Hans C. Coester, MD, FACS
Charles Joseph Hodge Jr., MD
Seth M. Weingarten, MD

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

Russel H. Patterson Jr., MD

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

Susan Baker
Edward C. Benzel, MD
Peter McL. Black, MD, PhD
Gary M. Bloomgarden, MD
Henry Brem, MD, FACS
Joyce A. Campbell
Israel P. Chambi-Venero, MD, FACS
Dr. & Mrs. William T. Couldwell
Arthur L. Day, MD, FACS
Fernando G. Diaz, MD, PhD
Howard M. Eisenberg, MD
Richard G. Fessler, MD, PhD
Allan L. Gardner, MD

Dr. & Mrs. M. Sean Grady
Regis W. Haid Jr., MD
Robert E. Harbaugh, MD, FACS
L. N. Hopkins III, MD
Theodore R. Jacobs, MD
Jeffrey K. Kachmann, MD
Joseph T. King Jr., MD
Robert B. King, MD
Thomas A. Kingman, MD
Lyal G. Leibrock, MD
David C. Leppla, MD
Danilo Martinez-Rivera, MD, PC, FACS
Paul C. McCormick, MD
Drs. George & Linda Ojemann
Mr. & Mrs. Russell M. Pelton, JD
Albert L. Rhoton Jr., MD
Dr. & Mrs. Jon H. Robertson
Richard L. Rovit, MD
James T. Rutka, MD, PhD, FRC
Robert Lewis Simons II, MD, FACS
Gary K. Steinberg, MD, PhD
Elizabeth Sweet
Greg Errol Thompson, MD
Dr. & Mrs. Clarence B. Watridge
Dr. & Mrs. H. Richard Winn
Fremont P. Wirth, MD
Seth M. Zeidman, MD

Gifts of \$500 to \$999

Liz Aubert
Nicholas M. Barbaro, MD
Ms. Joel C. Boaz, MD
Art Camacho, MD
Maurice Collada Jr., MD
Ara Jason Deukmedjian, MD
Stephen R. Freidberg, MD
Jeff Gibbs
Tamir Kazaz
David G. Kline, MD
Paul B. Nelson, MD
Robert G. Ojemann, MD
John P. Olson, MD, PhD
Rob G. Parrish, MD, PhD
John P. Phillips, MD
Dr. & Mrs. Bruce E. Pollock
Dr. A. John Popp &
Ms. Margaret M. Vosburgh
Joshua M. Rosenow, MD
Gail L. Rosseau, MD
Mark Edwin Shaffrey, MD
Paul E. Spurgas, MD
Olawale Sulaiman, MD
Dennis A. Turner, MD
G. Edward Vates, MD, PhD
Steven Christopher Zielinski, MD

Gifts of \$250 to \$499

Charles B. Agbi, MD
Ron L. Alterman, MD
Jaime A. Alvarez, MD
Kathleen H. Baker, MBA, CNRN
William B. Betts, MD
Gregory Corradino, MD
Edward A. M. Duckworth, MD
Michael G. Fehlings, MD, PhD, FRC
Dr. & Mrs. Grant E. Gauger
Vivekananda Gonugunta, MD, FRCS
Michael V. Hajjar, MD
F. Richard Jordan, MD
Richard S. Kyle, MD
Christopher M. Loftus, MD, FACS
Rob Logan
William J. Meyer, MD
Richard Bacon Morawetz, MD
Ewell Lee Nelson III, MD
Katie Orrico, JD
Kimberly A. Page, MD

Robert Pitt
Tamara P. Porfirio
Gustavo Ramos, MD
James Karl Sabshin, MD
Matt Sexton
Philip T. Shields, MD
Paul Truman Turner, MD
Kevin A. Walter, MD
Paul Williams
Ronald E. Woosley, MD
Ahmet Yildizhan, MD

Gifts of \$100 to \$249

Ramin M. Abdolvahabi, MD, PhD
M. Samy Abdou, MD
Pablo J. Acebal, MD
Alex Alfieri, MD
Michael A. Amaral, MD, FACS
Ahmed S. Ammar, MD, PhD
Mark E. Anderson, MD
Michel W. Andre-Kildare, MD
Thomas J. Arkins, MD
Neal I. Aronson, MD
Reza P. Asli, MD
Jens Astrup, MD
Kumaran Bahuleyan, MD
Gregory J. Bailey, MD, FACS
Hillel Baldwin, MD
Gene H. Barnett, MD, FACS
David W. Beck, MD
Donald L. Behrmann, MD, PhD
Roberto B. Bellegarrigue, MD, FACS
Vladimir Benes Jr., MD, PhD
William J. Beutler, MD, FACS
Randolph C. Bishop, MD, FACS
W. Ben Blackett, MD, JD
Deborah A. Blades, MD
Miroslav P. Bobek, MD
Frank H. Boehm Jr., MD
John D. Brophy, MD, FACS
Lewis J. Brown, MD
Michael R. Burt, MD
Charles V. Burton, MD
Rafael Camacho Morales, MD
Peter W. Carmel, MD
Leonard John Cerullo, MD, FACS
Luiz G. Cesar, MD
Kym Lynette Chandler, MD, FACS
Chen-Nen Chang, MD

NREF Investigator Moves Cancer Treatment Ahead

ROBERT L. MARTUZA, MD

Each year, exciting research is conducted through research fellowships and young clinician investigator awards funded by the Neurosurgery Research and Education Foundation. The project proposed by William Curry, MD, entitled, "Herpes Simplex Virus Oncolytic Immunotherapy for Brain Tumors," is one of nine grants awarded by the NREF in 2005.

Following completion of residency in 2004, Dr. Curry joined the neurosurgical staff at Massachusetts General Hospital. As a member of the Pappas Center for Neuro-oncology, he specializes in the surgical treatment of brain and spinal cord tumors, both malignant and benign. His academic interests center on brain tumor immunology, and he is developing a translational research program in which he is studying the neuro-immunology of primary malignant brain tumors and devising immunotherapeutic strategies for treatment of patients with malignant gliomas and developing clinical trials. Dr. Curry has been working in close collaboration with Glenn Dranoff, MD, at the Dana Farber Cancer Institute.

"Overcoming immunological tolerance to tumor cells is the ultimate goal of cancer immunotherapy," said Dr. Curry. He added that "Low levels of tumor-cell MHC and an immunosuppressive tumor microenvironment allow the growth of cancer cells that escape innate immunity. G207 is a multi-mutated replication-conditional herpes simplex-1 that selectively replicates in tumor cells, has attenuated neuro-virulence, and in addition to its oncolytic properties, is

able to stimulate specific and lasting anti-tumor immunity in mice."

Dr. Curry and his research team propose that pulsing immature dendritic cells with G207-infected tumor cells is a potent activating stimulus for antigen presentation and generation of anti-tumor immunity, to be demonstrated by vaccine treatment in mice bearing subcutaneous and intracranial Neuro2a tumors. They also believe that increasing the number of dendritic cells in tumors, either by co-injection of ex vivo generated cells or by systemic mobilization from the bone marrow by Flt3-L, a growth factor, increases anti-tumor immunity in the context of oncolytic virus infection.

"I became very interested in the anti-tumor immune response that is provoked by oncolytic herpes virus," said Dr. Curry. "Not only does the virus kill the tumor cells themselves, but also it kicks off an immune response against the tumors. I'm looking at ways of better comprehending that mechanism, and, likewise, augmenting the effect."

Without the support of the NREF, this research project may not have been funded; brain tumor research requires consistent support and ongoing investigations if scientists hope to understand and provide novel treatments to improve patient care and prolong life. Dr. Curry is one of thousands working toward that end.

Dr. Curry was born in New York, N.Y., and studied as an undergraduate at Harvard University. He graduated from Cornell University Medical College in 1997, after which he began neurosurgery residency at Massachusetts General. ■

Robert L. Martuza, MD, is chair of the Department of Neurosurgery at Massachusetts General Hospital in Boston, Mass.

Tamerla D. Chavis, MD
 Han-Jung Chen, MD, PhD
 Theresa M. Cheng, MD, PhD
 William W. Choi, MD, FRCS
 Mike Wooliang Chou, MD
 Edward V. Colapinto, MD
 Patrick J. Connolly, MD
 E. Sander Connolly Jr., MD
 Daniel F. Cooper
 Jesus Roberto Cordero, DMD, MD
 Amilcar J. Correa, MD
 Paul D. Croissant, MD
 William T. Curry Jr., MD
 Olivier De Witte, MD, PhD
 Stefanie Ann DiCea, PA-C

John B. Dietze, MD
 James D. Dillon, MD
 Jose Dones, MD
 Dr. & Mrs. Scott C. Dulebohn
 Susan Eget
 Abdeslam El Khamichi, MD
 Foad Elahi, MD
 Muftah Sam Eljamel, MD, FRCS
 Scott W. Elton, MD
 John M. Emery III, MD
 Mr. & Mrs. Ronald W. Engelbreit
 George D. England, MD, MS
 Jaime Espinosa, MD
 Shahin Etebar, MD
 Laurie R. Faircloth, RN

Robert P. Feldman, MD
 Robert A. Fenstermaker, MD
 Duncan Kinnear Fischer, MD, PhD
 Kimball S. Fuiks, MD
 Daniel H. Fulkerson, MD
 Duane B. Gainsburg, MD, FACS
 Javier Garcia-Bengochea, MD
 Ira M. Garonzik, MD
 A. Eric Gioia, MD
 Gabriel A. Gonzales-Portillo, MD, FACS
 Charles R. Gordon, MD
 Judith L. Gorelick, MD
 Michael W. Gorum, MD
 Vicente C. Gracias, MD
 John Andrew Grant, MBChB, FRCS

Andrew Greenberg
 Francois Grisoli, MD
 David P. Gruber, MD
 George Gruner, MD
 Lee R. Guterman, PhD, MD
 Ryder P. Gwinn, MD
 Walter A. Hall, MD
 J. Frederick Harrington Jr., MD
 Robert F. Heary, MD
 Fraser C. Henderson, MD
 Donald L. Hilton Jr., MD
 William A. Himango, MD
 Philip J. Hlavac, MD
 Mojgan Hodaie, MD
 Brian F. Hoefflinger, MD
 Continued on page 22

NREF DONORS

Continued from page 21

Eric K. Holm, MD, FACS
 Jay U. Howington, MD
 Dr. & Mrs. John W. Hutchison
 Mark R. Iantosca, MD
 Panos Ignatiadis, MD
 Orhan Ilercil, MD
 Anthony S. Ioppolo, MD
 Warren Y. Ishida, MD
 George I. Jallo, MD
 Saied Jamshidi, MD
 Omar F. Jimenez, MD
 John K. Johnson, MD, FACS
 Randall Roy Johnson, MD, PhD
 David S. Jones, MD
 F. Douglas Jones, MD
 Cecil Lai Jun, MD
 Chikafusa Kadowaki, MD, DMSc
 Kamal K. Kalia, MD
 Charles C. Kanos, MD
 Barry Irving Katz, MD
 M. Richard Katz, MD
 David B. Kee Jr., MD
 Daniel F. Kelly, MD
 Matthew B. Kern, MD
 Kaveh Khajavi, MD, FACS
 Agha Shahid Khan, MD
 Ghahreman Khodadad, MD
 Steven P. Kiefer, MD
 Bruce L. Kihlstrom, MD
 James A. Killeffer, MD
 Hyung Dong Kim, MD
 Jhinho Kim, MD
 Seong-Rim Kim, MD
 Young H. Kim, MD
 Glenn W. Kindt, MD
 Michael A. King, MD
 Wesley A. King, MD
 Daniel L. Kitchens, MD, FACS
 Stefan J. Konasiewicz, MD
 Edward J. Kosnik, MD
 Diana L. Kraemer, MD
 John E. Krettek, MD, PhD
 Douglas W. Laske, MD
 Joung H. Lee, MD
 K. Stuart Lee, MD, FACS
 Kendall H. Lee, MD, PhD
 James J. Leech, MD, FACS
 Arnaldo Levy, MD
 Adam I. Lewis, MD
 Veetai Li, MD
 Benjamin C. Ling, MD

Mark E. Linskey, MD
 George E. Locke, MD
 Blas Ezequiel Lopez Felix, MD
 Jeffrey A. Louie, MD
 Lucy Carole Love, MD
 Laverne Ray Lovell, MD
 Walter X. Loyola, MD, FACS
 Andres M. Lozano, MD, PhD
 Drew Mackenzie
 Leonard I. Malis, MD
 Gunwant S. Mallik, MD
 Jeffrey C. Margetts, MD
 Robert L. Martuza, MD
 Thomas K. Mattingly, MD
 William H. McAllister IV, MD
 Dennis E. McClure, MD
 J. Gordon McComb, MD
 Michael Dean Medlock, MD
 Donald L. Mellman, MD, MPH
 Alejandro Mendez, MD
 Robert C. Meredith, MD, FACS
 Michael W. Meriwether, MD
 James C. Metcalf Jr., MD
 Thomas H. Milhorat, MD
 Thomas J. Mims Jr., MD
 Horace Lee Mitchell, MD
 Jean-Pierre Mobasser, MD
 Dante Joseph Morassutti, MD
 Steven E. Murk, MD
 Chikao Nagashima, MD
 Brian Nesbitt
 Edward A. Neuwelt, MD
 Fariborz Nobandegani, MD
 Stephen K. Ofori-Kwakye, MD
 Masayoshi Ohi, MD
 Hidehiro Oka, MD, DMSc
 Alessandro Olivi, MD
 Joe I. Ordia, MD
 Julio A. Ordonez, MD
 Jorge Eduardo Ortega, MD
 Brett A. Osborn, DO
 Marco Antonio Osorio, MD
 Helson Pacheco-Serrant, MD
 Sylvain Palmer, MD
 Salvatore J. Palumbo, MD
 Christopher F. Penka, MD, FACS
 Noel I. Perin, MD
 Srinivasan Periyanyagam, MD
 Axel Perneczky, MD
 Brian K. Pikul, MD
 Paul J. Pitlyk, MD
 Charles E. Poletti, MD

Mark R. Proctor, MD
 Donald J. Prolo, MD
 Melvin E. Prostkoff, MD
 Dr. & Mrs. Gregory J. Przybylski
 Archimedes Ramirez, MD
 Ruben Ramirez Del Toro, MD
 Harold Louis Reigate, MD
 Daniel K. Resnick, MD
 James A. Rodgers, MD
 Norman C. Rokosz, MD
 Chanland Roonprapunt, MD, PhD
 Arthur P. Rosiello, MD, FACS
 Arnold J. Rossi, MD
 Frederic T. Schwartz, MD
 Daniel J. Scodary, MD, FACS
 Brett Andrew Scott, MD
 Chandranath Sen, MD
 Magdy S. Shady, MD
 David H. Shafron, MD
 Theodore L. Slade, MD
 Andrew E. Sloan, MD
 Harold P. Smith, MD
 Kris A. Smith, MD
 Mark Vogel Smith, MD
 Joseph A. Soliman, MD, FACS
 Aldo Spallone, MD
 Dennis D. Spencer, MD
 Timothy Strait, MD
 Ethan Taub, MD
 Kevin Renard Teal, MD
 David G. T. Thomas, MD
 Larry D. Tice, MD
 Shelly D. Timmons, MD, PhD
 Patrick R. Tomak, MD
 Carlos Gustavo Troccoli, MD
 Jaime A. Trueba-Reyes, MD
 Goro Tsuchiya, MD
 David D. Udehn, MD
 Robert P. Uteg, MD
 Dante F. Vacca, MD
 Vassilios G. Varsos, MD
 Francisco Villarejo, MD
 Michael A. Vogelbaum, MD, PhD
 Anne L. Wagenbach, RN
 Joseph Robert Walker, MD
 Wayne Lee Warren, MD
 Robert F. Wayner, MD
 Daniel Vernon White, MD
 James Scott Williams, MD, PhD
 Owen R. T. Williams, MD
 Matthew John Wills, MD
 Diana E. Wilson, MD

Jeffrey A. Winfield, MD, PhD
 Ken R. Winston, MD
 Eric H. Wolfson, MD, FACS
 Eric J. Woodard, MD
 Charles J. Wright, MD
 Michael V. Yancey, MD
 David Yashon, MD, FRCS
 Kent D. Yundt, MD
 Khosrow Zolfoghary, MD, FACS

Gifts up to \$99

Chad Alonso
 Eric Ankerud
 J. Pedro Aros Ojeda, MD, FACS
 Yunus Aydin, MD
 Scott Bronstein
 Terri L. Bruce
 Dr. & Mrs. David Cavanaugh
 Linda Cloward
 S. Marshall Cushman, MD
 Mark A. J. Dexter, MD
 Robert E. Dicks III, MD
 Patrick F. Doherty, MD
 Alessandro Ducati, MD
 Jacques N. Farkas, MD
 Susan E. Funk
 Carlton C. & Michele S. Gregory
 Chip Helm
 Linda Hull
 Maurizio Iacoangeli, MD
 Alan Kirschenbaum
 Jeffrey P. Kochan, MD
 Juan Alberto Lourido, MD
 Jennifer McLaughlin
 Alexander David Mendelow, PhD
 Chris Merritt
 Balamurugan Mangaleswaran
 Nadar, MS
 Joseph G. Ong, MD
 Guillermo Osorio Elias
 Chris A. Philips
 Justin W. Renaudin, MD
 Bill Schendel
 Harish N. Shownkeen, MD
 Joni L. Shulman
 Basit Ali Syed, MD
 Hiroshi Takahashi, MD, DMSc
 Mr. & Mrs. John Trice
 G. Dennis Vaughan
 Dr. & Mrs. W. Brian Wheelock
 Matthew W. Wood Jr., MD
 Kevin M. Zitnay, MD

Financial Target or Intrepid Investor?

Information Is Essential for a Sound Financial Game Plan

The last thing on my mind during the end of residency and first years in neurosurgical practice was financial planning. Certainly, there were many people with keen interest in the earning power of a freshly minted neurosurgeon who were trying hard to sell me products and services. It was very difficult to discern honest advice and recommendations from self-interest driven by “back door” fees.

While there is clearly future earning potential at the end of residency, newly practicing neurosurgeons typically will complete training programs and begin practice well into their 30s, already with growing families. In fact, the transition at the end of training usually heralds a period of increased debt load for young physicians. Typically this involves consolidation of years of accumulated student loans along with new pressure to enter the housing market. After several years in practice, one must grapple with financing a practice “buy-in.” Overall, this leaves the young neurosurgeon in a difficult cash flow situation. There is little motivation and scant resources to address issues such as asset protection, retirement plan design, estate planning and investment management.

With little understanding of neurosurgeons' career path, those in the financial services community often assume that all physicians, regardless of career stage, have excess cash flow and, hence, big targets on their chests. Frequently the compensation for sellers of financial services products plays a significant role in these transactions, but this role remains hidden to the physician-buyer. For example, a standard arrangement in the insurance industry is that agents are compensated for selling a policy based on a percentage of the client's first-year premium. An example from the investment side is the use of proprietary

funds. Often investment advisers receive better compensation for investing assets in funds owned or managed by the firm for which they work. The investor must understand this relationship and be comfortable that the risk and net return merit the investment.

Four Principles for Sound Financial Management

It becomes the responsibility of the buyer to sort the “essential” from the “nice, but not necessary” and the “patently absurd.” The following principles provide some information on a rational approach for a neurosurgeon at any career stage to manage a sound relationship with the financial services world.

.....
Know what you need for today and will need for tomorrow. Any sound business must have a firm grasp of its operating expenses. This is a key to cash flow management. It is also true for personal finance. It is crucial to know the amount required monthly for all living expenses. This will, of course, determine the amount of surplus remaining for investment toward future needs. Looking to the future, one must estimate a retirement age and a projected income to sustain the desired standard of living. These estimates will be keys to investment and insurance strategies.

.....
Realize one's own mortality. By the time neurosurgeons finish residency, most have families who depend on their income. A primary purpose of any financial plan should be insuring protection of one's family from untoward eventualities. This typically would be accomplished through a combination of insurance and estate and trust services. A secondary motivation to the young neurosurgeon is that rates will always be at their lowest while

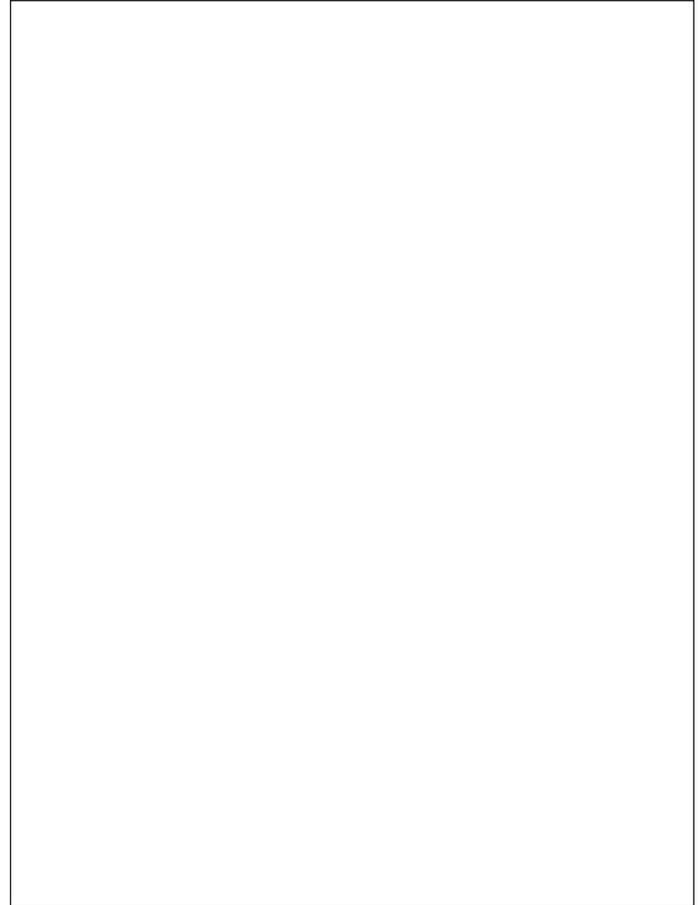
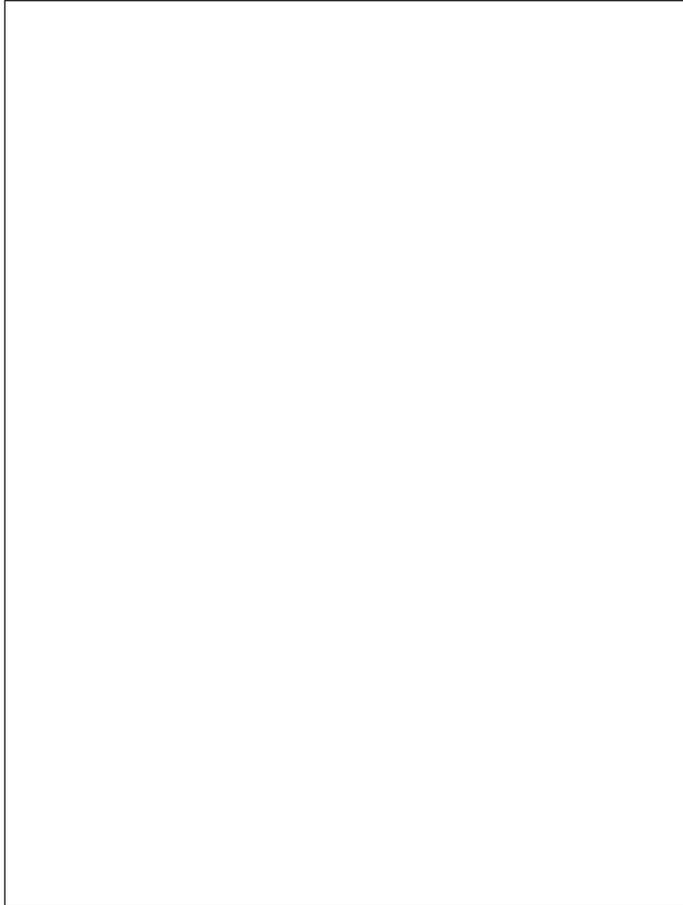
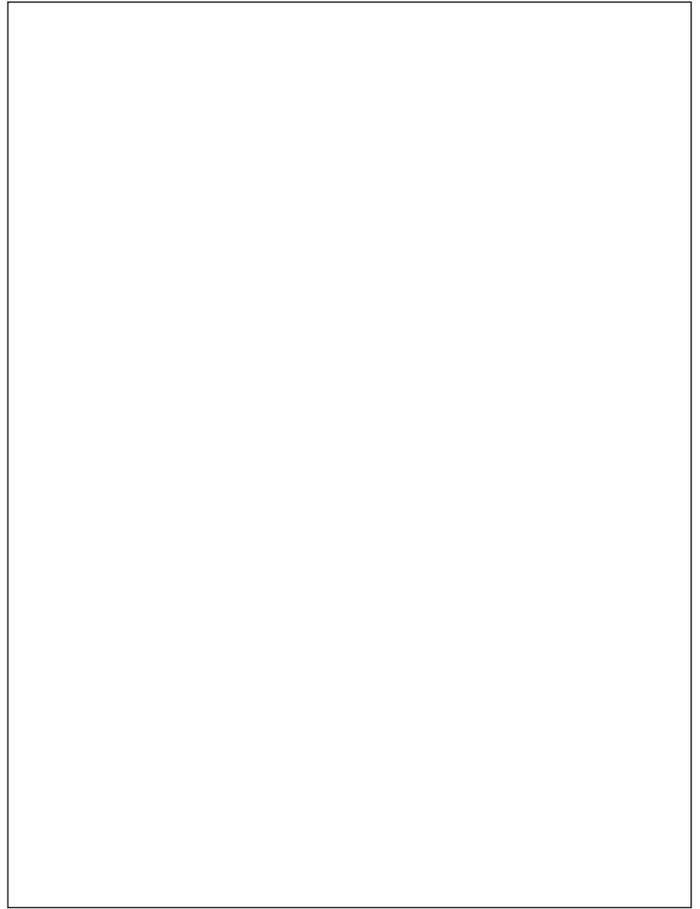
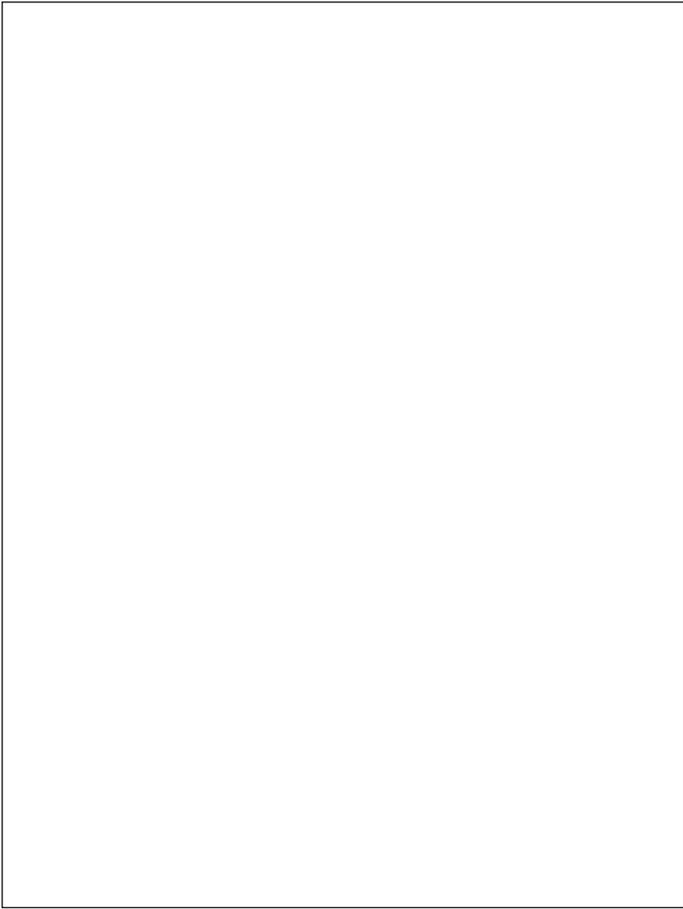
one is in good health and they typically can be locked in for many years.

.....
Invest rationally and with an appropriate time horizon. It is important to appropriately fund retirement and college savings with a plan that factors in projections of risk, return, inflation and time horizon. Once these priorities are met, excess cash flow may then be used for alternative investment strategies and those with more risk.

.....
Prioritize. In medicine, triage is a practice that is utilized to allocate scarce resources. In financial planning at any stage in life, it is important to use similar prioritization to allocate one's financial resources. For example, the neurosurgeon just out of training might be in the market to lock in significant disability insurance, whereas a whole life policy or investment in oil exploration might not warrant the cash flow or risk involved. As one's career progresses, it is important to reassess the prioritization to ensure that current and future needs will be met.

Sound financial planning is something that all neurosurgeons should pursue whether at the beginning, middle or end of their professional careers. This can be done with the help of a trusted, consultative financial adviser who can help to evaluate and coordinate appropriate investment goals and objectives. Ultimately it can be incumbent on the motivation of the individual physician to ensure a secure financial future. ■

.....
Michael Sheinberg, MD, MBA, a neurosurgeon who practices in California, and **Kelly Trevethan, CIMA**, are financial advisers with the Physicians' Financial Resource Group of Oppenheimer & Co., Inc., www.opco.com/pfrg.



TIMELINE: Neurosurgery Through History

Medical Records: The Medium and the Message

MICHAEL SCHULDER, MD

When your carefully scanned and compiled digital patient record is erased from your hard drive, you may find yourself nostalgic for the days of hard copy. How “hard”? Consider that the first medical records were recorded on clay tablets, using the wedge-shaped writing system known as cuneiform.

The evolution of document storage continued through the Egyptian papyrus, the medieval parchment, the bound codex, the introduction of paper from China, Gutenberg’s printing press, the 19th century typewriter, and now the electronic record.

Remember that these are just media. The message largely remains the same. Ethics of the Physician, a ninth century book by Ishaq bin Ali al Rahawi of north-

Consider that the first medical records were recorded on clay tablets ...

ern Syria, includes the following recommendations regarding record keeping:

The physician, when entering a patient’s place to visit and treat, first calls for a blank white paper to write on, [and] after pondering the patient’s condition [records his evaluation and prescribes treatment].... When he comes back, he sees what has changed or happened and records it in the same way, and so on in every visit. If he sees a sign that warns of worsening, he mentions that. If worsening does occur as he warned, he records it until the end of the illness and the patient encounter. If the

patient recovers, he takes that record to keep as a resource or a reminder if another condition happens to that human. If the patient dies and someone raises the question of a mistake committed by the physician, the physician meets with the experienced people, he brings out the record to be examined by knowledgeable professionals in medicine. If the disease proves to be the same as was told, and the signs were the signs of the disease that are characteristic for it, and the drugs and management were satisfactory, the physician would be thanked and would leave. If not, he shall get what he deserves....

Take good care of the patient, pay close attention to the digital record and back it up, or you may also “get what you deserve.” ■

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

Risk Management continued from page 19

1) **The reasonable patient standard**—What would the average patient need to know in order to make an informed decision regarding the decision and/or procedure?

2) **The reasonable physician standard**—What would a typical physician disclose about this decision and/or procedure?

3) **The subjective standard**—What would this particular patient need to know and understand to make an informed consent?

A growing number of courts are applying the reasonable patient standard. The reasonable physician standard is generally viewed as inconsistent with the goals of informed consent because the focus is on the physician rather than on precisely what the patient needs to know. The subjective

standard is rarely applied given the difficulties of tailoring information to each patient.

The Better Course of Action

A threshold issue in this case was the performance of an unexpected procedure—a biopsy instead of a discectomy. Most physicians do not routinely consult with patients for all “contingency plans” prior to entering the operating room. Thus, a neurosurgeon typically will not consult with a patient regarding a tumor biopsy before operating on a disc.

Once the neurosurgeon in this case discovered that the disc was not herniated, the better course of action from a legal perspective would have been to close the incision and discuss an exploratory procedure with the patient and/or the patient’s family. ■



NEW! Scientific and Practice Management DVDs

Select sessions from the 2005 AANS Annual Meeting have been videotaped and made available on DVD. Topics cover tumors, interbody lumbar fusion, and risk management and financial strategies for your practice.

For more information, including DVD descriptions, visit the AANS Web site at www.AANS.org.

Congress Struggles to Stop Fee Cuts

Medicare's SGR Overhaul Likely Will Feature Pay for Performance

Come Jan. 1, the Medicare physician payment system is likely to have had a major overhaul, perhaps permanently changing the way physicians are paid under the system. Three months out, however, exactly what and when is going to happen is still up in the air.

Under the current Medicare physician payment system, physician reimbursement will be cut by 4.3 percent on Jan. 1. In addition, reimbursement will be cut by an additional 5 percent each year until 2011, reducing reimbursements by close to 30 percent over the next six years. The problem is that the current system, called the sustainable growth rate formula, or SGR, places an overall cap on the amount the government will spend each year on Medicare Part B physician spending. In the last four years, the government has spent more than the cap because the volume of services has increased significantly. The system now must make up the cost overruns incurred in the past several years and also bring the current year's spending back under the target. Obviously, if there is a set limit on the total amount paid and the number of services has increased, the only way to meet the target is to reduce the amount paid per service. That is exactly what the SGR formula will do over the next six years—reduce the amount paid per service in order to account for the recent unplanned increase in volume.

Policymakers want the SGR system's replacement to be a pay-for-performance system.

“The sustainable growth rate formula is really an unsustainable formula,” said Nancy Johnson, R-Conn., chair of the House Ways and Means Subcommittee on Health. “Physician payment cannot be cut by 30 percent over the next six years without having a drastic and devastating impact on the Medicare system.”

Who Will Fund SGR Replacement?

While most policymakers agree that the physician payment cuts need to be prevented, there is a huge barrier in the way: money. Repealing the SGR and replacing it with another system based on medical inflation will cost between \$154 billion and \$185 billion over 10 years.

The money problem is further compounded by a debate between the U.S. Congress and the Bush administration over who should fund the changes to the formula. If Congress takes action to repeal or alter the SGR formula, it must pay the bill; if the administration takes action, for example, by removing the costs of outpatient physician-administered drugs from the costs counted against physicians, it must pay the bill. Despite more than a year of letters between Congress and the administration on the topic, it still has not been decided who is going to do what, and the administration claims it still is not sure it has the legal authority to do anything.

Enter: Pay for Performance

Policymakers do agree that they neither want to “throw money” at the problem nor repeal the SGR until a replacement system is ready to be implemented. They also are sure about what they want that replacement system to be: pay for performance, P4P, also known as value-based purchasing. Under such a system, a portion of a physician's Medicare reimbursement would be tied to whether certain quality and effi-

ciency measures were met. Data on a provider's ability to meet these measures would also be available to the general public. The Centers for Medicare and Medicaid Services already has demonstration projects underway at 10 sites.

“From the beginning, neurosurgery's position on pay for performance has been ‘no way,’” said Troy Tippet, MD, chair of the AANS/CNS Washington Committee. “However, policymakers view P4P as the great redeemer of the Medicare program, and we have not been able to dissuade them despite dozens of meetings and letters.

“Unfortunately, other medical groups have agreed to sign on to the concept, and Congress and the CMS are moving forward,” he said. “At this point, the only thing worse than pay for performance is a pay-for-performance system that is designed without our input, with some bureaucrat in Washington, D.C., setting neurosurgery's quality measures.”

Legislation Moves Forward

Two pay-for-performance bills have been introduced in Congress so far: in the Senate, S. 1356, the Medicare Value-Purchasing Act of 2005, and in the House, H.R. 3617, the Medicare Value-Based Purchasing for Physicians' Services Act.

The Senate bill, sponsored by Charles Grassley, chair of the Senate Finance Committee, and Max Baucus, the committee's ranking Democrat, would implement pay-for-performance systems for most Medicare providers, including physicians. The bill would not address the impending physician payment cuts, although both senators have stated that they expect the bill to be brought to the floor in concert with separate legislation focused on the payment cuts. Under the bill, the CMS will be required to begin collecting “utiliza-

tion" information on physicians in 2006. In 2007, physicians will be required to *report* quality data to the CMS and those who do not will have reimbursements cut by 2 percent. Pay for performance will begin in 2008. Those physicians who do not participate will receive a 2 percent payment reduction. Physicians who choose to participate will either be rewarded with "bonus" payments of 1 percent to 2 percent if certain quality measures are met, or they will be penalized with cuts of 1 percent to 2 percent if quality measures are not met. The CMS will have significant control over the quality measures.

The House bill, sponsored by Rep. Nancy Johnson, would apply only to physicians and would address the pending Medicare payment cuts. This bill specifically will repeal the SGR formula and replace it with the Medicare economic index rate. (The rate traditionally is between 2 percent and 3 percent, meaning that physicians will see a 2 percent to 3 percent increase in Medicare physician payment rates each year.) In 2007–2008, physicians who begin reporting quality measures will receive the full inflationary payment update; those who do not participate will receive 1 percent less. In 2009 and thereafter, physicians who meet the quality measures will receive the inflationary update, and those who do not will receive 1 percent less. The bill also specifically states that physician specialty societies, like the AANS and CNS, should develop appropriate quality measures for their specialty, although they will have to go through a national vetting and approval process. Lastly, the bill establishes a system whereby physicians will be rated against their peers. Beginning in 2009, the ratings will be available to the public, as is currently the case with hospitals participating in the Medicare quality program.

Initially, neurosurgery has endorsed a set of quality measures designed by the Surgical Care Improvement Program.

"While neither of these bills is perfect, from neurosurgery's standpoint the House bill is much better than the Senate bill," Dr. Tippet said. "Our worst nightmare is that pay for performance will be implemented on top of the SGR and the payment cuts, and the House bill will not allow that to happen." Dr. Tippet also stressed the essential element of putting specialties in charge of determining meaningful quality measures.

The Senate and House bills will be debated throughout the fall. Neurosurgery will be working to ensure that the payment cuts and SGR repeal are part of any pay-for-performance legislation; public reporting is eliminated, minimized or at least delayed; the implementation of pay for performance is delayed until quality measures can be developed and pilot-tested across a variety of practice settings; and appropriate risk adjustments to any measures can be developed, tested and included.

QIW Develops Neurosurgery's Quality Measures

While the primary care specialties already have developed and approved a "starter set" of quality measures, organized surgery is a bit behind the eight ball. In an effort to ensure that neurosurgeons are able to participate in such P4P programs, the AANS and CNS, through the Washington Committee, have established the Quality Improvement Workgroup. The QIW is in

the process of developing quality measures. Initially, neurosurgery has endorsed a set of quality measures designed by the Surgical Care Improvement Program, of which the American College of Surgeons is a principal participant. These measures include:

- 1) reducing surgical site infections by the timely administration and proper duration of antibiotics, glucose control and proper hair removal;
- 2) preventing adverse cardiac events by appropriately administering beta-blockers to reduce perioperative ischemia;
- 3) preventing deep vein thrombosis and pulmonary embolism with appropriate prophylactic treatment; and
- 4) preventing postoperative pneumonia by employing appropriate medical intervention.

Recognizing that measuring surgical outcomes is the gold standard of quality improvement, the QIW also is launching an initial outcomes pilot project related to lumbar spinal stenosis. The goal is to test the feasibility of developing a robust outcomes database (similar to the program instituted by the Society of Thoracic Surgeons) for a variety of common neurosurgical procedures. Ultimately, the QIW hopes that such a program will not only help neurosurgeons participate in pay-for-performance programs, but will fit in nicely with the American Board of Neurological Surgery's Maintenance of Certification requirements as well.

"In the beginning, these general, process-type measures likely will be used," said Robert Harbaugh, MD, chair of the QIW. "However, procedure-specific outcomes measures will be demanded as the programs evolve; these measures take years to develop, which is why we are starting now." ■

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

Evaluation in the Blink of an Eye

“Thin-Slicing” Unlocks the Complexities of Intuition



Blink: The Power of Thinking Without Thinking, by Malcolm Gladwell, 2005, Little, Brown and Company, 277 pp., \$25.95.

Eddie Kahn was the most intuitive person I have ever known. He had an uncanny ability to instantly evaluate neurological patients, and no one at the University of Michigan Neurosurgery Department ever remembers him being wrong. On one occasion, I presented a 13-year-old patient to him in clinic. He walked in the room, glanced briefly at the patient and announced that she had a craniopharyngioma. The patient had had no imaging studies or endocrine laboratory tests but, of course, Dr. Kahn was right. The neurosurgical residents were in awe of Dr. Kahn and always wondered how he could do it. Now a book written for the

general public may explain his uncanny evaluative power.

Blink, written by Malcolm Gladwell, staff writer at The New Yorker and best-selling author of *The Tipping Point*, is about the content and the origin of those instantaneous impressions and conclusions that spontaneously arise whenever we meet a new person, confront a complex situation or have to make a decision under conditions of stress. This is not a fanciful explanation. Our unconscious is a powerful force, but our snap judgments can be educated and controlled. The power of knowing in the first few seconds is not a magical gift given only to a few, but rather an ability that we ourselves can cultivate.

A major reason that people can judge others so rapidly is that faces can be read so accurately. Facial expression has been carefully analyzed and categorized through the Facial Action Coding System, or FACS.

Researchers have used this system to study everything from schizophrenia to heart disease. It has even been put to use by computer animators in the movies.

One of the key techniques in rapid cognition is known as “thin-slicing.” This refers to the ability of our unconscious to find patterns in situations and behavior based on very narrow samples of experiences. In the same way that a small biopsy can give an accurate diagnosis of a complex tumor, psychologists can learn to predict the outcome of a marriage based on a few minutes spent observing a couple.

Gladwell credits neurologist Antonio Damasio with localizing the ventromedial prefrontal cortex as the key site in decision making. Patients with damage to this area may be intelligent, rational and functional, but they lack judgment.

Rapid cognition does have the potential for leading us astray. We make connections much more quickly between pairs of ideas that already are related in our minds than we do between pairs of ideas that are unfamiliar to us. That explains why tall people generally get more respect, and earn more money, than short people. That also explains why it is much easier for attractive political candidates to get elected.

Truly successful decision making relies on a balance between deliberate and instinctive thinking. On the other hand, in good decision making, frugality matters. Complex problems must be reduced to their simplest elements: Even the most complicated of relationships and problems have an identifiable underlying pattern. A successful decision maker needs to edit.

An interesting two-hour read, *Blink* is a good choice for a book to grab at the airport the next time you take a flight. ■

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.

AANS Bulletin: A Top Member Benefit and a Leading Predictor of Satisfaction With AANS Membership



The AANS *Bulletin* is the primary source of news that affects the practice of neurosurgery: practice management, legislation, coding and reimbursement, professional development and education, and more. Readers are invited to participate in the *Bulletin*.

Neurosurgical Professionals

- Write a letter to the editor.
- Submit an article or article idea.

- Submit socioeconomic research papers for peer review.
- Provide news briefs to News.org.
- Submit a neurosurgical meeting to the online calendar.

Corporations

- Advertise in the *Bulletin*.
- Sponsor the *Bulletin* (an exclusive opportunity).

Learn more at www.aans.org/bulletin.

SOS for SRS Codes Answered

Stereotactic Radiosurgery Recommendations Approved

The AANS/CNS Washington Committee in July approved several recommendations intended to alleviate uncertainty associated with coding stereotactic radiosurgical procedures. The recommendations address variations in the number of isocenters, the number of lesions treated in a single visit, and multi-session treatments.

Over several months the AANS/CNS Stereotactic Radiosurgery Task Force conducted a detailed review of the history of and the current clinical and administrative challenges in this field, culminating with the presentation of the recommendations to the Washington Committee by task force member Andrew Sloan, MD. The next step in the process is to present the recommendations to the American Medical Association.

This Coding Corner will recount the development of Current Procedural Terminology codes for stereotactic radiosurgery and will examine recent payer issues that have prompted analysis of proper coding as well as recommendations for coding the various aspects of stereotactic radiosurgery.

The CPT code 61793 was developed more than 15 years ago to describe stereotactic radiosurgery. In 1995, as part of the first five-year review of the Medicare fee schedule, the code was brought to the AMA's Relative-value Update Committee, known as the RUC. The vignette developed to describe the typical patient reflected a single 2-centimeter metastatic renal carcinoma to the cerebellum. The service description included placing a stereotactic frame under local anesthetic, obtaining imaging and using it for dosimetry planning, positioning the patient using the calculated target coordinates, and delivering the radiation treatment. Subsequent verification of coordinates for each isocenter treated was included. Removal of the frame completed the intraoperative component of the code.

Since the service description included frame placement and computer-assisted targeting, both codes 20660, application of stereotactic frame including removal, and 61795, stereotactic computer-assisted volumetric procedure, were considered inclusive components of 61793. This information is reflected in edits specified by the National Correct Coding Initiative of the Centers for Medicare and Medicaid Services that preclude coding 20660 and 61795 with 61793. The CMS also precludes use of assistants at surgery or cosurgery when performing 61793, but allows use of the -51 multiple procedure modifier when additional procedures are performed.

The code 61793 was revised in November 1996 to delineate the radiation sources that were being used for radiosurgery treatment. Although the original language described "proton beam" (suspected to have been intended to state "photon"), the new language included gamma particle- and linear accelerator-based equipment. Another editorial revision was made in November 1997 to reflect "fractionated" stereotactic radiosurgery in which treatment might be given over several sessions rather than just one. Since these were both considered editorial revisions, no change in the vignette and work value through the RUC process was required.

Some confusion was introduced after an article published in the May 2003 issue of CPT Assistant stated that 61793 should be reported only one time, regardless of the number of sessions necessary or "the number of lesions treated." The AANS/CNS Coding and Reimbursement Committee contacted the AMA regarding this additional interpretation, and a correction published in April 2004 stated that 61793 may be reported twice in a single operative session if an additional lesion is treated. The second code would be appended with

either the -59 distinct procedural service or -51 multiple procedure modifier, depending on the payer requirements.

Despite this correction, a third-party payer recently called attention to 61793. The payer had received a claim for 30 uses of 61793 in a single operative session and had contacted the AMA, prompting referral of the matter to the AANS/CNS Stereotactic Radiosurgery Task Force.

The task force's recommendations are consistent with the vignette and service description of 61793 and also reflect similar conclusions reached by the AANS/CNS Coding and Reimbursement Committee in previous examinations of this code. Code 61793 describes stereotactic radiosurgery of a single lesion, with one or more isocenters, treated in a single fraction or over several sessions. Based on CMS payment policy, treatment of additional lesions should be described with 61793 appended with the -51 or -59 modifier, for up to a total of five lesions in one session. If a complex lesion requires complicated targeting beyond the number of isocenters used in a typical treatment, than the -22 unusual procedural services modifier can be additionally appended to the code. Use of the -58 staged procedure modifier, or use of 20660 and 61795, was not recommended, since multiple sessions, frame placement and computer-assisted treatment, respectively, were considered integral components of 61793.

The 61793 coding odyssey reflects the complexities involved in describing physician services, even if only a single code is available for reporting. The members of the AANS/CNS Stereotactic Radiosurgery Task Force are commended for their diligent efforts. ■

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

For Further Information

"CPT Process—How a Code Becomes a Code," www.ama-assn.org/ama/pub/category/3882.html.

Patient Safety Act Becomes Law

What Neurosurgeons Need to Know

After years of negotiations and revisions, the Patient Safety and Quality Improvement Act of 2005 became law on July 29. The legislation calls for creation of a new voluntary reporting system for medical “near misses” and errors. Through this system, anonymous patient data will be submitted to established or newly created patient safety organizations, the errors will be analyzed, and recommendations will be made for system changes to prevent future errors.

The law defines patient safety organizations as independent organizations certified every three years by the U.S. Department of Health and Human Services. These organizations will collect anonymous incident and patient information, which then will be forwarded to a national database. Based on this data the HHS, through the Agency for Healthcare Research and Quality, will make recommendations that include methods to reduce errors and improve patient safety. Importantly, the legislation will preserve confidentiality of patient information under the Health Insurance Portability and Accountability Act. Additionally, the information and recommendations will not identify specific providers or individuals; appropriate fines would be administered for such disclosures. However, information available outside the patient safety evaluation system, such as billing and medical records, will not be shielded.

Addressing concerns of medical practitioners and lawmakers alike that the reported data would be used for litigation purposes rather than to reduce medical errors, President Bush said that the legislation is a “common-sense law that gives legal protections to health professionals who report their practices to patient safety organizations.” The legislation is “litigation neutral”; that is, reported data cannot be used as new information in lawsuits, although

the law does not prohibit the use of information that is currently available. Additionally, reported data cannot be used by an accrediting body or regulator to take action against a provider. An exception is provided in the case of a criminal act if a judge determines the information is not available from any other source.

The legislation’s voluntary reporting measure was an important concession for lawmakers. Earlier iterations had called for mandatory reporting of medical errors and had offered little or no confidentiality protections; passage of the law in such a form likely would have fueled new lawsuits.

The issue of medical errors was highlighted in a 1999 Institute of Medicine report, which found that between 44,000 and 98,000 Americans die every year from errors in healthcare. The report emphasized that most medical errors are not attributable to individual misconduct or negligence but rather are systems related. This emphasis on healthcare delivery systems subsequently was identified by the Agency for Healthcare Research and Quality as key to reducing medical errors. The medical errors topic has become a frequent focus of politicians, the press, and forums on improving medical quality and medical liability reform.

As integral members of the healthcare delivery system, physicians share these patient safety concerns and are taking action to reduce medical errors. In the past year, the surgical “time out” and marking the site of surgery have been two of many quality improvements instituted at local and regional levels in surgical practices. Additionally, restrictions on the number of hours residents can work also have taken effect with the goal of, among other things, improving patient safety. Several recent studies in neurosurgical and other subspecialty literature have closely examined the roles of physicians

and healthcare organizations in the context of safety. Anesthesiology’s successful program to improve patient safety often has been hailed as a prototype: Over the past 20 years, the Anesthesia Patient Safety Foundation has been instrumental in reducing the number of anesthesia-related deaths from 1 in 10,000 to 1 in 200,000 patients using technological advances, standardization of equipment, checklists and patient safety education.

The Patient Safety and Quality Improvement Act of 2005 demonstrates lawmakers’ aggressive stance regarding medical quality in the marketplace. Although the legislation has no direct connection with value-based purchasing or medical liability reform, it certainly sets the stage for patient safety remaining in the public eye in the coming years. The fact that lawmakers already are proposing new legislation regarding patient safety, value-based purchasing, health information technology, and medical liability reform highlights the importance of patient safety in the national arena. ■

Alexander Mason, MD, is the CNS Public Policy Fellow working in the office of Senate Majority Leader Bill Frist.

AANS Endorses JCAHO Protocol

In an Aug. 15 letter to the Joint Commission on Accreditation of Healthcare Organizations, AANS President Fremont P. Wirth, MD, officially endorsed the Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery, stating:

Patient safety and outcomes are very high priorities of the AANS, and as such, the AANS endorses the Joint Commission’s Universal Protocol [which] offers clear, concise solutions to help physicians and allied health professionals eliminate preventable surgical errors....

The text of the letter is available at www.AANS.org, article ID 28577, and the Universal Protocol is available at www.jcaho.org.

Summer Legislation Promotes P4P

Pay for Performance Requires Proactive Physicians

The Centers for Medicare and Medicaid Services adopted a system of reimbursement reduction to physician participants under the sustainable growth rate methodology that is used to determine Medicare payments to physicians. If left in place, the SGR system will produce Medicare physician payment reductions of between 4 percent and 5 percent each year through at least 2011. The CMS Medicare Payment Advisory Commission and the U.S. Congress recently have focused on the development of measures to provide payment incentives under the Medicare program to improve the overall quality of services provided to Medicare beneficiaries.

While these discussions have extended across the range of providers paid by Medicare, much of the more recent discussion surrounding pay for performance, known as P4P, or what is now being called value-based purchasing, has focused on the physician community. This is similar to what has been implemented on the inpatient side, with bonuses paid to high performers and a shopping comparison Web site available for consumers. The purpose of P4P is to base physician payment on quality and efficiency instead of on a volume-related flat rate.

Most government policymakers view P4P as the great redeemer for the Medicare program. While there is no proof that a P4P system would save any money, private insurers and corporations are pushing for P4P as a way to inject accountability into the overall healthcare system. While P4P, outcomes analysis, evidence-based medicine, etc., have the potential to improve patient care, there are great concerns regarding the proposals that are starting to surface.

The U.S. Congress and the CMS have been very clear that they believe the physician community, and physician specialty organizations in particular, should develop the quality measures for their specialty. While both Congress and the CMS have stated clearly that the physician community has been put on notice that quality measures are needed, a lack of measures will not stop this project from moving forward: If we do not develop quality measures, they will be developed for us!

The American College of Surgeons, in cooperation with the CMS and others, has developed quality improvement programs, such as the Surgical Care Improvement Project and the National Surgical Quality Improvement Program, which may serve as the backbone for future efforts to establish quality improvement throughout the U.S. surgical community. The current programs include aspects related to the prevention of complications including infection, myocardial infarction, postoperative pneumonia and thrombophlebitis.

Proposed P4P Legislation

The first pieces of pay-for-performance legislation were introduced over the summer. An overview of these proposals follows, and full text of each bill is available at <http://thomas.loc.gov>.

Health Technology to Enhance Quality Act of 2005, S. 1262

The first piece of legislation discussing P4P was introduced by Senate Majority Leader Bill Frist of Tennessee and Sen. Hillary Rodham Clinton of New York. The bipartisan legislation chiefly addresses electronic medical records, but includes P4P language. The legislation

It is time for neurosurgeons to take a proactive stance in the determination of our reimbursement and the measures used to establish that reimbursement, rather than letting the system dictate how we will be paid for what we do.

calls on the U.S. Department of Health and Human Services to adopt uniform healthcare quality measures to assess the effectiveness, timeliness, patient self-management, patient-centeredness, efficiency and safety of care delivered by healthcare providers across all federal healthcare programs, including Medicare. In addition, the legislation directs HHS to establish a value-based purchasing pilot project using the measures developed and electronic medical records. There is no money allocated to this pilot project and the legislation directs the CMS to use existing Medicare funds as necessary.

The legislation also states that modifications should be made to the physician fee schedule to include payment for reporting on quality measures and overall improvement of healthcare quality. Payments will be made by taking a cut from all providers and reallocating the funds to those partici-

pating. Despite its prominent sponsors, this bill is considered symbolic “place-holder” legislation meant to get the ball rolling, bring attention to the issues and send a message to the healthcare community that the process has begun.

Medicare Value Purchasing Act of 2005, S. 1356

The Medicare Value Purchasing Act of 2005 was introduced by Chuck Grassley of Iowa, chair of the Senate Finance Committee, and Max Baucus of Montana, the committee’s ranking Democrat.

In summary, the bill provides for comprehensive P4P across all of Medicare, including physician services. However, physician participation will not be mandatory. Payments to physicians who do not participate will be cut by 2 percent on Jan. 1, 2007. Payments to physicians who do participate also will be cut 1 percent to 2 percent; beginning Jan. 1, 2008, participating physicians will be required to submit quality and efficiency data to the CMS in the manner determined by the CMS, and they will be responsible for any administrative costs. All data collected after Jan. 1, 2008, will be made publicly available with no legal protections. On Dec. 31, 2009, participating physicians may, or may not, receive a bonus payment of some yet to be determined amount if they meet the criteria set forth by the CMS after the fact.

Quality measures will be created by a CMS-funded, National Quality Forum-like entity that will include a variety of healthcare providers, consumer groups, purchasers and others. Physicians will know the measures used to determine payment in 2008, but will not know the thresholds and the payment levels. Sustainable growth rate cuts of 5 percent per year will continue under this bill.

Medicare Value-Based Purchasing for Physicians’ Services Act of 2005, H.R. 3617

The Medicare Value-Based Purchasing for Physicians’ Services Act of 2005 legislation

was introduced by Nancy Johnson, chair of the House Ways and Means Health Subcommittee. Specifically, H.R. 3617 would restructure the Medicare physician reimbursement formula to link payment to quality incentives. It also would enact much needed reforms to preserve the financial viability of physician practices and preserve patient access to surgical care.

The bill repeals the SGR methodology used to determine the annual update for Medicare physician payments and bases future payments on the Medicare economic index, which measures annual practice inflation costs for physicians. It enacts a phased-in, value-based purchasing program over several years by starting with voluntary, initial reporting measures beginning in 2007. It bases quality measures for a value-based purchasing program on the efforts of physician specialty organizations, such as the American College of Surgeons’ work with the Surgical Care Improvement Project and the National Surgical Quality Improvement Program.

Under this process, specialty societies must bring quality measures forward by March 6, 2006, or the CMS will develop initial measures for that specialty. Reporting on quality measures will begin Jan. 1, 2007.

Payment based on performance will begin Jan. 1, 2009. Some of the measures could be based on resource use, but physicians will have the power to define risk-adjusted efficiency thresholds. Public reporting of physicians’ quality ratings will start in 2009.

ACS Supports H.R. 3617

In a recent communication from the American College of Surgeons, Thomas Russell, MD, FACS, stated:

...a P4P program must replace the SGR with a reimbursement formula that better accounts for rising practice costs, must be phased-in over several years, and must be based on the physician community’s proven quality improvement efforts. An

incentive-based payment system simply cannot function in a “zero budget” environment under which increased spending on one set of services produces unsustainable payment cuts in another, and payment updates consistently fail to keep pace with the cost of providing care. The Medicare Value-Based Purchasing for Physicians’ Services Act of 2005 is the only proposal in Congress that takes these concerns into account.

The current economic and political environment presents difficult and challenging times for surgeons. Today’s problems require innovative solutions, and surgeons can and should be a part of the process of incorporating evidence-based medicine into the administration of our nation’s healthcare system.

It is time for neurosurgeons to take a proactive stance in the determination of our reimbursement and the measures used to establish that reimbursement, rather than letting the system dictate how we will be paid for what we do. ■

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

For Further Information

- See the Washington Update, page 26.
- The development of quality measures in anticipation of pay-for-performance measures was explored in *To Care Is Human: It’s Quality That Neurosurgery Must Define*, the cover section of the *AANS Bulletin’s* Spring 2005 issue. The spring issue is available in the *Bulletin* archives, accessible from www.aans.org/bulletin.

Mentoring Benefits Residents, Neurosurgery

New AANS Program Matches Residents With Seasoned Neurosurgeons

Mentoring has become an important focus in the field of medical education over the last decade. This interest is demonstrated by the dramatic increase in the number of peer-reviewed papers devoted to the topic: PubMed lists more than 2,000 papers on mentoring published between 1995 and 2004, compared with just 41 from 1975 to 1984. The *Annals of Surgery* recently devoted an entire issue to the topic of mentorship, in part as an exploration of ways to attract more medical students to the surgical specialty.

Within neurosurgery, attention to mentoring has lagged far behind until recently. During the five years of neurosurgical training, residents are greatly influenced by the academic environment in which they typically work and by their program directors. This traditional experience now can be augmented formally through the AANS Resident Mentoring Program.

“The job of the mentor is to complement what the resident’s program director already is doing,” said Samuel Hassenbusch, MD, PhD, chair of the AANS Resident Mentoring Program. “The resident benefits by receiving an additional relevant perspective on a career in neurosurgery.”

The AANS Resident Mentoring Program, launched last January, already has attracted more than 100 participants, with mentors currently outnumbering residents nearly 2 to 1. Each seasoned neurosurgeon acts as an available and approachable mentor who engages the resident and guides his or her professional development over time. Mentors share their experience and expertise as astute listeners, observers and problem solvers with the goal of helping the residents attain the professional goals they have developed for themselves.

As a participating mentor myself, I relish the opportunity to help a resident navigate



Resident Sudesh Ebenezer, MD, networks at the inaugural Resident Mentoring Reception during the AANS Annual Meeting in New Orleans. Information on how to participate in the program as a resident or as a mentor is available at www.aans.org/residents/mentoring.asp, or from Vanessa Garlisch, AANS education manager, at (888) 566-2267 or vlg@AANS.org.

the career paths and pitfalls I once experienced and that I’ve experienced in a different way working with residents as training program faculty. How to prepare for an interview, determine the type of practice to pursue, balance a personal life with a professional career—these are among the issues important to residents standing on the brink of the neurosurgical profession. I certainly am in good company—and the residents are in good hands—with my mentor colleagues, all of whom represent a remarkable depth and breadth of neurosurgical experience, and among whom are current and past leaders of the AANS.

Inherent in the concept of mentorship is that the relationship develops with some degree of choice. The program matches each participating resident with a neurosurgeon mentor based upon the criteria that the resident deems most important. Residents rank criteria important to them, such as the type of neurosurgical practice—private, academic, military—geographic location and subspecialty, by completing and submitting a brief form.

Many of the residents met their mentors face-to-face for the first time at the Resident Mentoring Reception held Sunday, April 17, during the AANS Annual Meeting in New Orleans. Dr. Hassenbusch spoke to the

group on the benefits of mentorship to residents, mentors and neurosurgery, and attendees took advantage of the opportunity to network with colleagues in an informal atmosphere.

A survey of residents who are participating in the program indicated great satisfaction with the process of enrolling in the program, receiving a mentor, and developing contact with the mentor. Nearly all of the respondents said that their mentors were helpful and available. They also said that e-mail communication provides an easy and suitable way for ongoing contact.

Initial feedback on the success of the AANS Resident Mentoring Program indicates that for neurosurgery the potential of mentoring finally has begun to be tapped.

“I have a new understanding and a better confidence in my decisions as a result of conversations with my mentor,” commented Brian Snyder, MD.

Another resident highlighted the challenges of mentoring as an active rather than a passive process:

“Good idea!” noted Sudesh Ebenezer, MD. “I think this program will be what an individual makes of it [and that] it has great potential.” ■

Deborah L. Benzil, MD, is associate professor at New York Medical College, Valhalla, N.Y.

Voters Approve Three Bylaws Amendments

Electronic Vote Debuts Problem-Free

In July, voting members of the AANS were asked to vote on three bylaws amendments. All three amendments were approved.

The first amendment relates to the Professional Conduct Committee. This amendment establishes three members as the quorum for meetings of the Professional Conduct Committee. The change will facilitate committee business when members must recuse themselves from specific hearings.

The second amendment, which also relates to the Professional Conduct Committee, allows the AANS to sanction suspended members for an indefinite length of time. Previously, suspensions were applied for a specific time frame such as six months or one year. In most cases, suspensions will continue to be time-specific. However, in cases wherein the sanction relates to a specific situation, such as the loss of certification or licensure, the member would be suspended until that situation is remedied, that is, until recertification or license renewal.

The third amendment adds the requirement that nominees for the positions of AANS president and president-elect must have previous experience as voting members of the AANS Board of Directors. The change will ensure that all nominated individuals have some familiarity with the management and operation of the AANS.

The three amendments were approved by 88.6 percent, 92.1 percent and 71.1 percent of those voting, respectively.

This was the association's first use of electronic voting. Members with e-mail addresses were sent information about how to vote online. No problems were reported by members during the electronic voting process.

Prior to the general vote, some members of the Young Neurosurgeons' Committee and the Membership Committee were invited to test the electronic voting system. This group encountered no problems and provided several important suggestions to improve the voting process. Thank you to the testers and to all members who voted on these bylaws amendments.

The direct link to the revised Bylaws of the American Association of Neurological Surgeons is www.aans.org/about/combined_bylaws_041.pdf. Printed copies of the bylaws may be requested by contacting Susan Funk at (847) 378-0507 or sef@AANS.org. ■

Thank you to the testers and to all members who voted on these bylaws amendments.

Susan M. Eget is AANS associate executive director-governance.

NEWS.ORG

AANS/CNS Sections Committees Associations Societies

Upcoming Annual Meetings of AANS/CNS Sections

Pediatric Section

Nov. 29–Dec. 2, 2005
Orlando, Fla.
www.neurosurgery.org/pediatric

Cerebrovascular Section and ASITN

Feb. 17–20, 2006
Orlando, Fla.
www.neurosurgery.org/cv

Spine and Peripheral Nerves Section

March 15–18, 2006
Orlando, Fla.
www.spinesection.org

AANS Offers New Home Study CME: Practical Reviews in Neurosurgery Practical Reviews in Neurosurgery is a home study activity that awards continuing medical education credit, which counts toward the AANS Continuing Education Award in Neurosurgery. The subscription series provides 10 to 12 summarized and reviewed articles on audio compact disc every four weeks. Physician reviewers provide expert commentary and weed out esoteric and nonclinical information, ensuring that the focus is on important, practical, problem-solving information vital to neurosurgical practice. More information is available toll free at (800) 633-4743, or for those outside Canada and the United States, collect calls are accepted at (205) 991-5188. Additional CME information is available at www.aans.org/education.

Van Wagenen Fellow to Publish Research Stephen Russell, MD, the 2004 Van Wagenen Fellow, conducted research for six months under the supervision of Michael Strupp, MD, professor of neurology at Ludwig-Maximilians University in Munich, Germany. They established that small amounts of the HSV-1 IE proteins, ICP0 and ICP4, are produced during viral latency and that the location of HSV-1 IE protein production correlates with the chronic lymphocytic inflammation present within latently infected human trigeminal ganglia. They also investigated the presence of latent HSV-1 and VZV infection in spinal ganglia and the relationship between latently infected ganglion cells and chronic immune reactions. The research findings are expected to be published in two peer-reviewed publications. Dr. Russell returned to the Department of Neurosurgery at New York University where, as assistant professor, he is concentrating on peripheral nerve injury and repair. He will serve as the neurosurgical representative to the newly established New York Nerve Center where, as a 2005 NREF Young Clinician Investigator, he will conduct a translational research project entitled Netrin-1 and the Homing Behavior of Regenerating Axons in the Axolotl.

AANS Census to Reveal Trends in Neurosurgery Obtaining reliable data about today's neurosurgical professionals is the aim of the AANS census. System and process upgrades allow important demographic and neurosurgical practice trends to be identified over time. A

significant number of responses must be received for each census question in order for analysts to obtain a statistically valid sample. The census is accessible through www.MyAANS.org, where, after login, the "Census" link appears in the tool bar. Six categories include questions about individual data, such as additional degrees earned, and demographic data, such as practice location and subspecialty. The time estimate for taking the census ranges from about one minute when no changes are required to approximately 10 minutes when numerous updates are needed. Online instructions are available throughout the process.

Compelling Patient Stories Needed for 2006 Neurosurgery Awareness Week The AANS seeks submissions of personal stories from neurosurgical patients to be featured in public outreach materials promoting 2006 Neurosurgery Awareness Week, April 22–27. This campaign is designed to educate the public about the role of the neurosurgeon in treating a wide range of medical conditions and diseases. The three patients whose stories are chosen each will receive an American Express gift card. The deadline for submissions is Nov. 30. Details are available at www.neurosurgerytoday.org/what.

Neurosurgical Focus Call for Papers Topics and submission deadlines for upcoming issues of *Neurosurgical Focus*, the online, indexed, rapid-publication journal of the AANS are: Familial Neurological Disorders—January 2006 (Nov. 15); Pediatric Cervical Spine—February 2006 (Dec. 15); Degenerative Disease of the Lumbar Spine: The Old and the New—March 2006 (Jan. 15); and Options for Treatment of Glioblastoma: Present State of the Art—April 2006 (Feb. 15). Additional information is available at www.aans.org/education/journal/neurosurgical.

Nominations for 2006 Young Neurosurgeons Public Service Citation The Public Service Citation recognizes the extraordinary efforts of a young neurosurgeon who, outside the traditional art and science of neurosurgery, has served the public in an exemplary fashion, thereby benefiting mankind and bringing honor to neurosurgery. Additional details are available at www.aans.org/young_neurosurgeons/pdfs/psc_guidelines.pdf. ■

Smartphones: A Smart Choice

Phone—Handheld Computer Cuts Waistline Clutter

Smartphones integrate the functions of a cellular phone with the attributes of a handheld computer. All smartphones have personal information management software, and most have wireless connectivity to remotely read and send e-mail, browse the Internet, and send and receive instant messages. Some smartphones also offer multimedia functions such as music, video playback and a camera. Before buying a smartphone, top considerations are where the phone will be used and what functions and software applications will be needed, as well as one's own level of comfort with the operating system.

Phone Types: GSM vs. CDMA

Cellular phones transmit and receive data via different networks. The two most popular networks are Groupe Speciale Mobile, or GSM, and Code Division Multiple Access, or CDMA.

GSM networks were developed in Western Europe and are the standard for wireless voice and data transmission throughout much of the world. In the United States, Cingular and T-Mobile are the major carriers with GSM networks. People who travel frequently may want to consider a GSM phone, as it will function anywhere in the world. The disadvantage of GSM is that coverage in the United States, although good, is not as extensive as CDMA. Additionally, data transmission rates are slower than CDMA. A GSM phone that supports the EDGE protocol offers faster data transmission.

CDMA coverage in the United States is more comprehensive than GSM, but the ability to roam internationally is limited to countries in South America, Eastern Europe and Asia. For those who prefer faster data transfer and who do not often travel internationally, a CDMA phone may be the better choice.



The Treo 650 (left) and the BlackBerry 7520 are pictured.

OS Affects Software Availability

As with handheld computers, smartphones primarily use one of three operating systems: Palm, Windows or Symbian. The operating system determines the functions available for the smartphone. The smartphone's memory and operating system also limit software availability, so the requirements of software under consideration—many medical software products can be found at www.pdamd.com, www.handheldmed.com and www.medicalpocketpc.com—should match these capabilities.

Palm Inc. was a pioneer in the handheld computer revolution. Hundreds of software applications have been written for the Palm, including coding and electronic medical records software. The author owns the Treo 650, an enormously popular choice, as confirmed by a discreet inspection of belts around the hospital.

Not to be outdone, Microsoft developed its Windows Mobile OS. There is very little difference in software availability for either Palm or Windows smartphones, and most

large manufacturers of cellular phones have developed smartphones that run on Windows. Some of the more popular models are the Motorola MPx220, Audiovox SMT5600, Sony Ericsson P910a, Samsung SCHi730 and Nokia 3620.

Another major player is the BlackBerry, by Research in Motion Limited, which runs on the Symbian OS. Although third-party programs are available for the BlackBerry, medical software availability is limited compared to Palm and Windows platforms.

Focus on Functionality

For the technophile, functionality is where the Palm Treo and Windows smartphones diverge from the BlackBerry. While cell phone functionality varies among different models, the following information provides a general overview of what a prospective buyer might expect of these three main smartphone types.

The Palm Treo and Windows smartphones have personal information management, or PIM, software which synchronizes with your home computer and manages your calendar, tasks and contacts list. A smartphone can do all of this remotely if your workplace has a Microsoft Exchange Server. Additionally, documents, spreadsheets and slide presentations can be edited and transferred. Database management is trickier but third-party software for this is available.

Both the Treo and Windows smartphones come with Web browsers for wireless Internet access. Audio and video files in most formats can be replayed with Windows Media Player or RealPlayer, and most of these phones have a built-in camera with video recording capability.

The BlackBerry has synchronizable PIM software, and it allows viewing, but not editing, of documents and spreadsheets. The Web browser of the Black-

Berry is less sophisticated than those of the Treo and Windows smartphones, and the BlackBerry offers neither multimedia capability nor a camera.

Wireless connectivity is also a prominent feature. Most smartphones offer infrared connectivity for line-of-sight communication with printers, handheld computers and other smartphones. Additionally, these phones often have Bluetooth capability for longer distance wireless connection. Some Windows-based smartphones, such as the Samsung and Sony Ericsson, have Wi-Fi capability for Internet browsing and wireless data transfer anywhere a Wi-Fi network exists. The BlackBerry lags behind in this area, offering only infrared connectivity.

Remote e-mail access also is available on all three smartphones. Often as many as eight separate e-mail accounts, such as

those on Yahoo, Hotmail and MSN services, can be accessed. Corporate e-mail accounts are trickier, and this is where the BlackBerry outshines the other smartphones. While the Treo and Windows smartphones can access some corporate e-mail accounts, particularly those running Microsoft Exchange server with ActiveSync capability or Mobile Information server, access is not guaranteed. The solution is an e-mail redirector, which is standard on the BlackBerry, but must be downloaded from a third-party developer for other phones.

If sending and receiving e-mail using a hyper-secure corporate account is of paramount concern, a BlackBerry may be for you. For familiar PIM software, Internet browsing, multimedia functionality and wireless connectivity, a Palm Treo or Win-

dows smartphone is a strong choice. In early 2006, a choice between Palm and Windows smartphones will be unnecessary; in late September these rivals announced a partnership that promises to produce a new “cutting-edge” CDMA-based Treo marketed by Verizon Wireless.

By combining a handheld computer, music and video playback, wireless Internet access, and remote e-mail capability in one reasonably small handheld device, a smartphone can go a long way toward cutting your waistline clutter. ■

K. Michael Webb, MD, is a spine fellow at Barrow Neurosurgical Associates in Phoenix, Ariz.

For Further Information

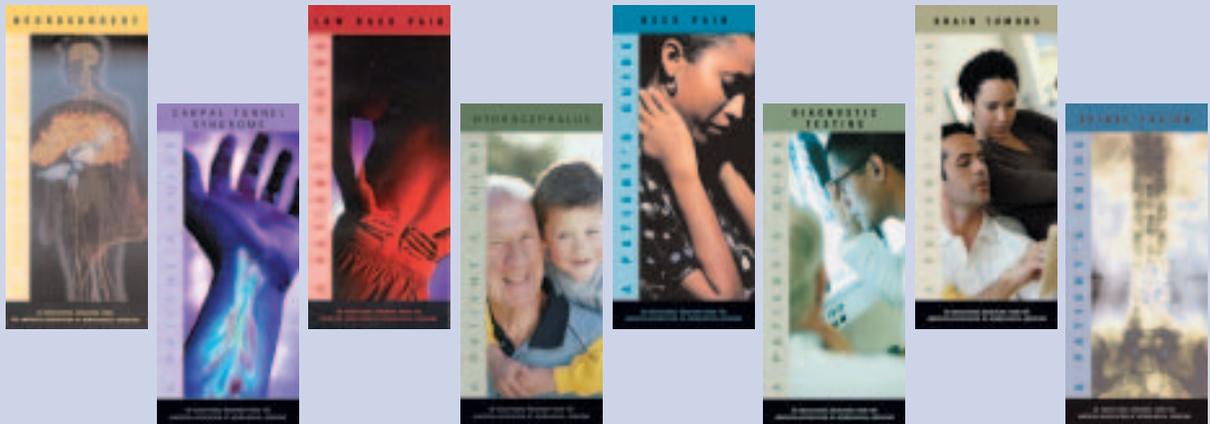
Przybylski, GJ. “Harnessing IT with a PDA,” *AANS Bulletin* Summer 2002. www.AANS.org, Article ID 9950.

COUNSEL AND EDUCATE PATIENTS AND THEIR FAMILIES

A PATIENT'S GUIDE

Often patients see you when they are in pain, frustrated by a prolonged condition, or overwhelmed with information they've received from friends, the Internet or other physicians. No matter how much time you spend with a patient, inevitably they feel better having something from you to take home.

AANS Patient Education Brochure Series



Visit the AANS Online Marketplace at www.AANS.org.

Claim Credit the Easy Way

Convenient Self-Report CME Form to Debut at AANS Annual Meeting

MANDA J. SEAVER

Among the numerous reasons for attending AANS annual meetings—acquainting oneself with the latest neuroscience research, networking with colleagues, sampling the newest neurosurgical devices, and others—a primary attraction is obtaining a sizeable portion of continuing medical education credit. Attendance at just one AANS annual meeting can earn a neurosurgeon at least one-third of the 60 category 1 credits required of members every three years and at the same time satisfy the membership requirement of attending at least one annual meeting every three years.

At the 2006 AANS Annual Meeting, completion of a single form will allow neurosurgeons to claim CME credit for the specific programs they attend. The Self-Report CME Tracking Form, shown in the sample on the opposite page, will be available in the on-site program book and at the AANS Resource Center located in the exhibit hall. An electronic version of the form will be available at www.MyAANS.org for online completion and submission.

The 2006 Annual Meeting Committee hit upon the simple four-step form after exploring a number of systems for verifying CME credit.

“After experiencing poor compliance with the ticketing system introduced at the 2004 meeting and observing long lines at other organizations’ programs where an electronic strip on each person’s name badge was scanned, we opted for this low-tech, one-page form,” said Nicholas Barbaro, MD, a member of the 2006 Annual Meeting Committee. “Rather than hunting for the right tickets every day or standing in line for every session, it’s much more convenient to think about this process just one time and then complete and submit the form in about five minutes.”

Until recently, meeting attendees were awarded CME credit based on the honor system. Registered neurosurgeons received full credit for attending plenary, scientific and section sessions held Monday through Thursday. What changed?

“While the AANS decides what constitutes neurosurgical credit counted toward its own Continuing Education Award in Neurosurgery, the AANS and other organizations like the American Medical Association must follow rules established by the Accreditation Council for Continuing Medical Education so that our programs can retain accreditation,” explained Joni Shulman, AANS associate executive director—education and meetings. “What changed was that a couple of years ago the ACCME tightened requirements for verification of attendance, and it became clear to all accredited organizations, including the AANS, that the honor system needed to be enhanced in order to comply with the ACCME requirements.”



San Francisco Convention & Visitors Bureau Photo

Chinatown is among the colorful and intriguing neighborhoods to be featured at the Streets of San Francisco-themed opening reception during the 2006 AANS Annual Meeting, April 22–27 in San Francisco. This meeting, entitled Meeting the Challenges of Neurosurgery: Expanding Resources for a Growing Population, kicks off celebration of the AANS 75th anniversary year; festivities will culminate with the 75th AANS Annual Meeting, April 14–19, 2007, in Washington, D.C.

As an augmented version of the honor system, the signed forms will be retained as evidence to auditors that each registrant’s attendance is verifiable. The forms will, however, be cross-checked with registration records.

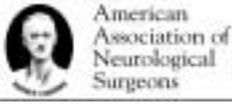
“If a registrant doesn’t pick up the registration packet until Tuesday, CME credit for Monday’s sessions cannot be awarded,” Shulman said.

The perforated Self-Report CME Tracking form will be available near the back of the on-site program book, which attendees receive as part of the registration packet. On the reverse of the tracking form will be an overall meeting evaluation form, which all attendees also need to complete for the 2007 Annual Meeting Committee, which will rely on member input to plan the next meeting.

“We are hoping for 100 percent compliance so our members can be awarded the credit they earn,” Shulman said. “To make the process as convenient as possible, at the meeting completed forms can be dropped into marked receptacles or returned to the AANS Resource Center in the exhibit hall, and after the meeting the forms can be sent to the AANS, while the online form at MyAANS.org can be completed and submitted online at any time.”

CME credit for practical clinics held the weekend before the meeting and for breakfast seminars conducted during the meeting will continue to be issued to attendees whose purchased tickets are turned in at the sessions. Neurosurgeons have the opportunity to earn approximately 24 additional CME credits by attending these programs. ■

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



2005 Self-Report CME Tracking Form Annual Meeting – Plenary Sessions

First/Last Name _____

AANS Member ID Number _____

- Step 1** Indicate how much time you spent in attendance at each of the general sessions.
- Step 2** Indicate the total time you attended for all of the sessions.
- Step 3** Insert your AANS Member ID number.
- Step 4** Fill out the overall meeting evaluation. This is required in order to receive your CME certificate.
- Step 5** Submit form by 5/1/2005.

1. log into MyAANS.org and submit electronically via the AANS resource center or back in your office (you can save & submit when complete)
2. or, complete both sides and return at the registration desk
3. or, fax to the AANS: (847) 378-0658
4. or, mail to AANS, 5550 Meadowbrook Drive, Rolling Meadows, IL 60008-3852 by May 1, 2005

THIS FORM MUST BE COMPLETED ALONG WITH THE OVERALL MEETING EVALUATION IN ORDER TO RECEIVE CME CREDIT	CME Credits Available	CME Credits Claimed [write in below]
MONDAY – APRIL 24, 2005		
Plenary Session I (Including Special Lecture I and Presidential Address) am sessions	3.25	
Scientific Sessions I-VI (Including Special Lecture II) pm session	2.50	
TUESDAY – APRIL 25, 2005		
Plenary Session II (Including Special Lecture III and Cushing Oration) am session	3.50	
Section Sessions (Including Pain; History; Peripheral Nerve; Tumor) pm session	2.75	
WEDNESDAY – APRIL 26, 2005		
Plenary Session III (Including Special Lectures IV, V, VI) am session	3.25	
Section Sessions (Including Spine; Cerebrovascular; Stereotactic & Functional; Neurotrauma & Critical Care; Pediatrics) pm session	2.75	
THURSDAY – APRIL 27, 2005		
Plenary Session IV (Including Socio-Economic Session and Special Scientific Session) am session	3.00	
Please note this form will be evaluated against the Meeting Registration Reports	Maximum Credits Available 21.0 Total CME Credits Claimed _____	

I attest that I have attended all of the sessions as indicated above. Submit by May 1, 2005.

(Signature)

(Date)

PRACTICAL CLINICS AND BREAKFAST SEMINAR CREDIT Practical Clinics and Breakfast Seminar credit is issued based upon purchased tickets that are turned in at the time of the course. CME will not be issued unless a ticket is received. ACCREDITATION STATEMENT: The American Association of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. AANS designates this educational activity for a maximum of 21 hours in Category 1 credit toward the AMA Physician Recognition Award. Each physician should claim only those credits actually spent completing the educational activity.

See reverse side for overall meeting evaluation

Online Marketplace Looks

Secure Ordering, Ease of Use Among Expanded Features

KATHLEEN T. CRAIG

The convenience of efficient and dependable online ordering, a staple of today's global marketplace, is now at the fingertips of AANS members. Unique resources created by neurosurgeons and other expert professionals specifically for neurosurgical practices can be quickly and easily accessed, reviewed and purchased securely through the new AANS Online Marketplace.

The completely redeveloped Online Marketplace, which is accessible via the AANS home page or directly via <http://marketplace.aans.org>, launched in September. When browsing the site, users will notice the Entrust Secured Site-Seal, which certifies that the communication between the Web site and the user's browser is secure.

Users also will find features that make it easier to find products and services that reflect their own particular interest. Browse by:

1. Category and Subcategories
2. Key Word or Phrase Search
3. Format Search (book, DVD, etc.)

4. Advanced Search, which locates items by title/description, author, and ISBN or order number, and offers pull-down menus to specify format, category or group

Learn More About a Product of Interest

To provide more information about products, the new AANS Online Marketplace presents expanded product descriptions that better explain what is included. Visitors can review a product's table of contents or peruse sample pages—the next best thing to being in a bookstore. Displayed are chapter titles with each author identified, or presenter listings with presentation titles for videos and compact disc products. This feature currently is available for the newest items; the AANS will update the other titles throughout the fall.

The newest offerings and any special promotions are featured on the home page. A “coming soon” feature provides product information about works in progress. This winter an additional feature will enable visitors to sign up to be notified when a product becomes available.

Personalized Experience for Each Visitor

Browsing through the marketplace does not require login. Any visitor can view featured items, plus the AANS Online Marketplace will present recommendations for similar items. A “recently viewed items” pane helps visitors return to items without searching again. However, the AANS strives to personalize each contact with members as much as possible. Once a visitor logs in, the experience is customized. The AANS Online Marketplace remembers items placed in a shopping cart and previously viewed items, and it pre-



sents member savings through special member discounts or promotions. The “smart” system will allow only members to purchase items that are exclusive to members and will present the appropriate price based on the visitor's member status. Visitors use the same login and username that they use for www.MyAANS.org.

Member Services Through AANS Partners

The expertise that AANS volunteer leaders and professional staff bring to the development of new products and services is the foundation of AANS offerings. At times, members and leaders identify practice needs that would best be met by providers with expertise in specialty areas. For those needs, the AANS occasionally joins with select outside partners to offer these member services. The advent of the new AANS Online Marketplace prominently presents these services on the home page, with direct links to service information and vendor contacts.

and Feels Brand-New



Examples of partner programs include AANS Professional Liability Insurance, offered through The Doctors' Company, and AANSCodingToday.com, offered through Physician Reimbursement Systems and part of the AANS Office Essentials program.

Coming in 2006

Realizing that office staff frequently place orders on behalf of members, the AANS will add a new feature that enables staff to obtain member pricing for designated members. Soon, members will be able to use special promotion codes and coupons to order online; currently those promotions must be managed by calling or faxing in orders.

The AANS appreciates any feedback members have regarding their experience with the new AANS Online Marketplace. Please direct any comments or suggestions to Kathleen Craig, AANS marketing director, at ktc@AANS.org or (847) 378-0537. ■

Kathleen T. Craig is AANS marketing director.

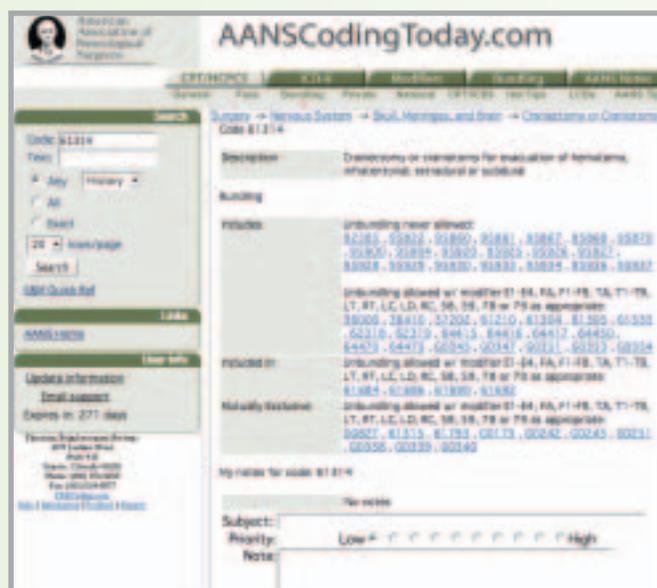
Keep Up With Coding Changes via AANSCodingToday.com

AANSCodingToday.com is the latest addition to the AANS Office Essentials suite, which is available through the AANS Online Marketplace. Through Office Essentials, programs that help AANS members run their practices more efficiently and more profitably are researched or developed; AANSCodingToday, which augments the suite's coding and reimbursement offerings, promises to help members do just that.

AANSCodingToday.com is a new interactive Web product that effectively obviates concerns about outdated printed coding resources. This Web site gathers information from the most frequently used printed resources into a searchable database that is updated as rules are changed or codes are added or eliminated. Physicians and their billing personnel can search for neurosurgical codes by number or by key words in the procedure name.

Included for each Current Procedural Terminology code are:

- Complete CPT, HCPCS Level II and ICD-9 Codes
- Current Medicare Correct Coding Initiative (CCI) Bundling Edits
- National and Local Medicare Fee Schedules
- Medicare National Policy Information
- Automatic Calculation of Medicare Fees by Geographic Locality
- Full-Text Local Coverage Determinations (LCDs, LMRPs) Filtered by Code
- Documentation Guidelines
- Private Insurance Rules and Practices



AANSCodingToday.com offers a bundling tool that checks the CCI edits for up to 20 CPT codes at one time and displays the results in an easy-to-read results matrix.

AANSCodingToday.com is administered by Physician Reimbursement Systems. AANS members receive preferred pricing through steep discounts on subscriptions, as well as free training and telephone technical support.

An annual subscription for AANS members is \$249 for the first user, and \$65 for each additional user per office. Both a tutorial in PDF format and a free 10-day trial are available at www.AANSCodingToday.com.



AANS LEADERSHIP 2005-2006

OFFICERS

Fremont P. Wirth, MD, *president*
Donald O. Quest, MD, *president-elect*
Robert L. Grubb Jr., MD, *vice-president*
Jon H. Robertson, MD, *secretary*
James R. Bean, MD, *treasurer*
Robert A. Ratcheson, MD, *past president*

DIRECTORS AT LARGE

Robert E. Harbaugh, MD
Christopher M. Loftus, MD
James T. Rutka, MD
Warren R. Selman, MD
Troy M. Tippett, MD

REGIONAL DIRECTORS

Jeffrey W. Cozzens, MD
Paul E. Spurgas, MD
Clarence B. Watridge, MD
Edie E. Zusman, MD

HISTORIAN

Eugene S. Flamm, MD

EX-OFFICIO

Rick Abbott, MD
Lawrence S. Chin, MD
Fernando G. Diaz, MD
Robert F. Heary, MD
Andres M. Lozano, MD
Dennis E. McDonnell, MD
Richard K. Osenbach, MD
Robert H. Rosenwasser, MD
Alex B. Valadka, MD
Ronald E. Warnick, MD

LIAISONS

Isabelle M. Germano, 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 & meetings*

DEPARTMENTS

Communications, Betsy van Die
Development, Michele S. Gregory
Information Services, Anthony P. Macalindong
Marketing, Kathleen T. Craig
Meeting Services, Patty L. Anderson
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 Annual Meeting of the
Congress of Neurological Surgeons**

Oct. 8-13, 2005
Boston, Mass.
(847) 240-2500
www.neurosurgeon.org

**American College of Surgeons
91st Annual Clinical Congress⁺**

Oct. 16-20, 2005
San Francisco, Calif.
(312) 202-5244
www.facs.org

**Advanced Technologies in the
Neurosciences, Translational
Research, Health Policy**

Oct. 18-20, 2005
Cambridge, Mass.
(617) 726-0797
www.cimit.org/atns

**American Society of Pediatric
Neurosurgeons Review Course⁺**

Oct. 21-23, 2005
Chicago, Ill.
(630) 681-1040
www.aspn.org

Transcranial Doppler Imaging

Oct. 21-23, 2005
Bothell, Wash.
(425) 398-7772
www.pvicme.com

**2005 Annual Meeting of the
American Society of
Anesthesiologists**

Oct. 22-26, 2005
Atlanta, Ga.
(847) 825-5586
www.asahq.org

**Research Update in
Neuroscience for Neurosurgeons**

Oct. 23-30, 2005
Woods Hole, Mass.
www.societyns.org

**Association of Military
Surgeons of the United States
Annual Meeting**

Oct. 30-Nov. 4, 2005
Nashville, Tenn.
(800) 761-9320
www.amsus.org

World Congress of Neurology

Nov. 5-11, 2005
Sydney, Australia
www.wcn2005.com

**Endoscopic Neurosurgery
Workshop**

Nov. 6-9, 2005
Ghent, Belgium
www.neuroendoscopy.org

**23rd Annual Neurotrauma
Society Symposium**

Nov. 10-11, 2005
Washington, D.C.
(305) 663-6777
www.neurotrauma.org/2005

Society for Neuroscience

Nov. 12-16, 2005
Washington, D.C.
(202) 462-6688
www.sfn.org

**Advanced Diagnosis & Treatment
for Neck & Back Pain Annual
Symposium**

Nov. 16-19, 2005
San Francisco, Calif.
(510) 536-9929
www.americanbacksoc.org

**AANS/CNS Section on
Pediatric Neurological Surgery
Annual Meeting⁺**

Nov. 29-Dec. 2, 2005
Orlando, Fla.
(888) 566-2267
www.neurosurgery.org/
pediatric

**33rd Cervical Spine Society Annual
Meeting and Instructional Course⁺**

Dec. 1-4, 2005
San Diego, Calif.
www.csrs.org

**Third Asia Pacific Multidisciplinary
Meeting for Nervous System Diseases**

Dec. 2-3, 2005
Shatin New Territories, Hong Kong
www.acp.cuhk.edu.hk/brain05

**Joint Annual Meeting of the
AANS/CNS Cerebrovascular Section
and the American Society of
Interventional & Therapeutic
Neuroradiology⁺**

Feb. 17-20, 2006
Orlando, Fla.
(888) 566-2267

**44th Annual Dr. Kenneth M. Earle
Memorial Neuropathology Review**

Feb. 20-24, 2006
Bethesda, Md.
(202) 782-2634
www.afip.org/Departments/edu/
upcoming.htm

**Southern Neurosurgical Society
Annual Meeting⁺**

March 2-5, 2006
Southampton, Bermuda
www.southernneurosurgery.org

**Interurban Neurosurgical Society
Annual Scientific Meeting⁺**

March 3, 2006
Chicago, Ill.
(715) 542-3201

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

AANS Courses

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

■ **Managing Coding & Reimbursement**

Challenges in Neurosurgery

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

Dec. 2-3, 2005 Washington, D.C.
Jan. 27-28, 2006 Las Vegas, Nev.
Feb. 17-18, 2006* San Antonio, Texas
March 3-4, 2006 St. Pete Beach/Tampa, Fla.
May 5-6, 2006* Philadelphia, Pa.
Sept. 8-9, 2006 Chicago, Ill.
Nov. 3-4, 2006* Los Angeles, Calif.

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

Nov. 6-8, 2005 Houston, Texas
May 7-9, 2006 Houston, Texas
Nov. 5-7, 2006 Houston, Texas

■ **Current Advances in Spinal Fixation:**

An Advanced Course
Feb. 11-12, 2006 Memphis, Tenn.

■ **Minimally Invasive Spinal Techniques**

June 10-11, 2006 St. Louis, Mo.

■ **Neurosurgical Practice Management:**

Improving the Financial Health of Your Practice
May 7, 2006 Philadelphia, Pa.
Sept. 10, 2006 Chicago, Ill.

