

AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS BULLETIN

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Neuro-Knowledge™

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Clinical Research

It's More Than Academic

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American
Association of
Neurological
Surgeons



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VOLUME 12 NO. 1

AANS MISSION

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

AANS BULLETIN

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

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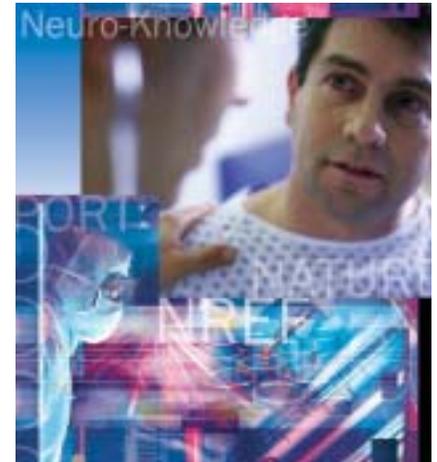
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One Goal at a Time

72nd President Reviews Recent AANS Progress

As my year as president of the American Association of Neurological Surgeons (AANS) concludes, it seems appropriate to engage in some introspection and review the progress made in the priorities that were set for the year, as outlined in my first President's Message last summer.

Unification: No. 1 Priority

The first priority I listed was the unification of organized neurosurgery, specifically of our two national organizations, the AANS and the Congress of Neurological Surgeons (CNS). With some sadness, I must admit that we have not been able to achieve this goal. However, you should know that both organizations engaged in an intense, good faith effort to achieve unification. Leadership from the AANS and the CNS with our respective counsels and a negotiator met several times in St. Louis to discuss different paradigms of unification that would be acceptable to both organizations. Ultimately, the CNS rejected the AANS' offer: a full merger with a single infrastructure, maintenance of the two annual meetings and the two journals, and a governance structure with equal participation from both organizations. The CNS proposal was to develop a separate entity, jointly owned and governed, which could perform many of the functions and services that now are performed jointly or independently. The AANS and CNS each would maintain a downsized infrastructure for performing those functions that are unique and distinctive of each. The AANS rejected this proposal, as it would result in three, rather than the current two, infrastructures and supporting staff.

While disappointed that unification was not achieved, I am proud to report that these discussions were not wasted since

they resulted in a major improvement in the relationship between the AANS and the CNS and a commitment to redouble our efforts to work together, jointly at times, independently at others, but always cordially and cooperatively for the benefit of our specialty.

Strengthening the AANS

My second priority was to continue to strengthen the AANS, building upon the solid foundation firmly established by my predecessors and by so many committed volunteers and staff. Today our financial situation is robust and healthy, although we

Roberto C. Heros, MD, is the 2002-2003 AANS president. He is professor, co-chairman and program director of the Department of Neurosurgery at the University of Miami.



would not mind a bit of help from the market with our investments! We have developed and will continue to develop new sources of revenue toward the ultimate goal of reducing our dues while enhancing the range of services to our membership. We have developed an intensive effort to enhance our educational offerings and to make our continuing medical education crediting and tracking process more relevant to the expected demands for maintenance of professional competence; these initiatives were extensively discussed in the Winter 2002 issue of the AANS *Bulletin*.

Our annual meeting has been significantly "re-engineered" to make it even more attractive and relevant to the current needs of our membership. Our Profes-

sional Conduct Committee is more active than ever and I am pleased to report that its activities earned for the AANS the honor of being named to the 2002 Associations Advance America Honor Roll in a national awards competition sponsored by the American Society of Association Executives.

My greatest source of pride, however, is the phenomenal improvement in the quality, stability and morale of our staff at the AANS Executive Office. One of the most delightful times of my presidency was a recent visit to Chicago where I was able to see and feel firsthand the commitment, loyalty and efficiency of our wonderful staff under the superb leadership of our executive director, Thomas A. Marshall. I wish every one of you could visit them and be uplifted, as I was, by their enthusiasm; I hope you know that you will always be welcome if you have an opportunity to visit our headquarters for whatever reason or for no reason at all other than to say hello ... and perhaps thanks!

External Challenges

Finally, we have made modest progress, often working hand-in-hand with the CNS, in meeting the formidable external challenges faced by our specialty. We contributed more than our share to the recent victory on Medicare reimbursement. Some relief has been gained with respect to the on-call requirements of the Emergency Medical Treatment and Labor Act. We are cautiously optimistic about some imminent relief in the professional liability insurance crisis; however, a major concerted effort not only by our national organizations but, importantly, by each neurosurgeon personally will be necessary to ensure ultimate victory in this crucial battle.

It has been a good year. I have enjoyed it thoroughly and I will be forever grateful for the honor of having presided over this wonderful organization. ■

NEWSLINE

News Members Trends Legislation

NEURO NEWS

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

- **CME for Bio Agent Preparation** The Bioterrorism Practical Readiness Network (Bio-PRN) offers clinical modules that focus on the infectious disease agents and toxins as outlined by the Centers for Disease Control and Prevention, and that provide an opportunity for free continuing medical education. Clinical diagnostic tools for all category A and B biological agents as well as resources for medical group practice managers are available. For information, go to bioprn.advancepcsmidnet.com.
- **Resident Duty Hours Finalized** The Accreditation Council for Graduate Medical Education (ACGME) in February approved the final requirements for resident duty hours. The rules, which were approved in draft form in September, will become effective July 1. Duty hours will be limited to “80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.” “Activities” include all clinical and academic duties, but exclude reading and preparation time away from the duty site. The rules provide for an exception of up to 10 percent of the 80-hour limit if a request is based on “sound educational rationale.” Information is available at www.acgme.org.
- **AANS Professional Conduct Committee Recommends Suspension** The American Association of Neurological Surgeons (AANS) suspended a neurosurgeon’s AANS membership for a one-year period for unprofessional testimony regarding treatment for acute head injury. Details of the case can be found in the Governance column in this issue. Such cases are reviewed by the AANS Professional Conduct Committee as part of the Professional Conduct Program, which was elected in 2002 to the Associations Advance America Honor Roll of the American Society of Association Executives. The AANS program was created to provide an impartial system for upholding the AANS’ Code of Ethics and to enforce the Expert Witness Guidelines, as well as the Position Statement on Testimony in Professional Liability Cases. For more information on AANS guidelines for professional conduct, see the Spring 2002 issue of the *Bulletin*, available at www.neurosurgery.org/aans/bulletin. The brain injury guidelines, Management and Prognosis of Severe Traumatic Brain Injury, are available from the Brain Trauma Foundation at www.braintrauma.org/index.nsf/pages/guidelines-main, and a bound version also is available from the AANS Online Marketplace at www.AANS.org. Additional guidelines for treatment of head injury and brain trauma are available online from the AANS/CNS Section on Neurotrauma and Critical Care at www.neurosurgery.org/trauma.
- **\$35 Billion for Uncompensated Healthcare in 2001** Researchers from the Urban Institute estimate that uninsured Americans received \$35 billion in uncompensated healthcare treatment in 2001, with federal, state, and local governments covering approximately 85 percent of those costs. The study reported that private practice physicians account for more than half of the subsidies that underwrite the cost of uncompensated care, and hospitals deliver two-thirds of such care. Results of the study are published in *Health Affairs* at www.healthaffairs.org/WebExclusives/Hadley_Web_Excl_021203.htm.
- **Neurosurgery Practice Has a Hand in New Specialty Hospital** The Chicago Institute of Neurosurgery and Neuroresearch (CINN) group is a force behind development of the Neurologic & Orthopedic Institute of Chicago, which celebrated its grand opening in February. The specialty hospital focuses on treating brain, spine and joint diseases, although it also will provide emergency services. According to the Web site at www.neuro-ortho.org, the facility is “the first freestanding, acute care hospital of its kind in the United States dedicated to the diagnosis, treatment and rehabilitation of neurologic and orthopedic patients.” A former community hospital was renovated to accommodate the new facility.

Clinical Research in Practice

There Is Value in Neurosurgeons' Participation

Early in life, I took a notion to make medicine a career as I watched my father journey through medical school, radiology residency, and private radiology practice, first in New Orleans, then Metairie, La., and finally Jupiter, Fla. Throughout his professional career, he believed enthusiastically that pioneering new procedures and publishing results was the icing on the cake of practice that kept work from descending into dull routine. He believed that research made a valuable contribution to the medical community and to public health.

He published original peer-reviewed studies on basket retrieval of retained common duct stones through T-tubes after cholecystectomy and on alcohol injection of renal and hepatic cysts, among other topics. Research in practice was a way of life, whether in a National Institutes of Health-funded research lab or in a community hospital's radiology suite.

Neurosurgical practice is no different, and in fact cries out more than ever for neurosurgeons in all modes of practice to contribute to the scientific knowledge base and to use valid research data to justify and improve decisions and procedures in everyday practice. Research is the rain that nourishes the seeds of discovery and renews and revitalizes neurosurgical practice. We must strive continuously to prove the value of what we do, as well as how to do it differently, and better.

Clinical research, or more specifically, how we as neurosurgeons incorporate research into our everyday practices, is the topic selected for this issue. The purpose is to examine how we find, use and add to neurosurgery's research knowledge repository. The development and dissemination of neurosurgical tools has never been faster,

“We must seek, whenever possible, unbiased clinical data, and when it is lacking, design and create it ourselves.”

but that growth comes at a price. The price is organized criticism and analysis of our assumptions, our practice, and the ideas and recommendations of our colleagues. We have to overcome the inertia of habit and seek better ideas, with the question perpetually before us, Am I perhaps mistaken; is there not a better way?

For example, endovascular treatment of carotid stenosis is an alternative treatment to carotid endarterectomy. We must seek proof as to whether endovascular treatment

(SPORT) discussed in this issue illustrates the need for routine prospective studies validating routine clinical care in all areas and subspecialty interests, rather than reacting to other studies of debatable design and questionable conclusions that threaten clinical practice.

Proof is a fundamental justification that we all too commonly neglect. We rely on our experience, on word of mouth, on imitation, and on authoritative pronouncement. It is the easy and fast way. But today's technological complexity and pace of change requires more. We must seek, whenever possible, unbiased clinical data, and when it is lacking, design and create it ourselves.

In this issue of the *Bulletin*, we catch a glimpse of research in many of its permutations and how it reaches and affects neurosurgeons in practice. Here we examine the role the American Association of Neurological Surgeons (AANS) plays in promoting research, both basic and clinical, in encouraging translation of bench research to bedside care, and in bringing practical applications and techniques to practicing neurosurgeons.

Research is not just an academic exercise or a scholar's responsibility. It is our glimpse into the future, our guide to the present and our legacy from the past. With this issue, we hope to tell not just the story of research in practice, but to rekindle interest and enthusiasm for participating in clinical research in every neurosurgeon's professional life. ■

James R. Bean, MD, is associate editor of the Bulletin and chair of the AANS/CNS Washington Committee. He is in private practice in Lexington, Ky.



offers true advantages over surgical treatment, and learn when it should be used. And we must train to use the method that is proven better.

Internal stabilization can relieve the pain of lumbar instability. We must learn what procedure works better, demonstrate when it is needed, and prove the belief with valid clinical data. The absence of valid outcome studies leaves us vulnerable, not only to criticism for performing unnecessary surgery, but also to denial of care when it is needed, based on invalid but unrefuted data. The Spinal Patient Outcomes Research Trial

NEWSLINE

News Members Trends Legislation

FROM THE HILL

PATIENT SAFETY BILL

PASSES HOUSE

The Patient Safety and Quality Improvement Act, H.R. 663, was passed in the U.S. House of Representatives and on March 13 it was referred to the Senate. The bill designates patient safety work as "privileged information" and provides whistle-blowers with protection from repercussions in the workplace. Perhaps the main feature is the voluntary reporting of medical errors to a national medical error database. Links to the bill are available at <http://thomas.loc.gov>.

For frequent updates to legislative news, see the Hot Topics page at www.neurosurgery.org/socioeconomic.

- **AANS and CNS Establish New PLI Listserv** With the professional liability insurance (PLI) crisis escalating, the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS) are receiving an increased volume of inquiries from members on all aspects of this issue. In an effort to help facilitate direct communication between neurosurgeons across the country, AANS and CNS have developed a new listserv devoted solely to this topic. Neurosurgeons are encouraged to register for and use this new communications tool so they can keep current on all aspects of the PLI issue. To subscribe to the listserv, go to www.neurosurgery.org/socioeconomic/liabilityreform.html. The address for posting messages to the listserv is: prof.liability@mail.neurosurgery.org.
- **House Passes PLI-Related Legislation: Focus Shifts to Senate** On March 13, by a margin of 229 to 196, the U.S. House of Representatives passed H.R. 5, the HEALTH Act, which was introduced by James C. Greenwood, R-Penn., in February. The measure, similar to legislation that passed the House last year, would place a \$250,000 cap on noneconomic damages, among other things. Nearly 700 neurosurgeons contacted their representatives urging support for this bill. To see how individual representatives voted, go to <http://clerkweb.house.gov/cgi-bin/vote.exe?year=2003&rollnumber=64>. Stiff opposition is expected in the Senate, where many lawmakers have voiced concerns about federal liability caps. Sen. Dianne Feinstein of California, one of the few Democrats supporting medical liability reform, had been negotiating a compromise with Republican leadership, but withdrew from discussions because physicians did not support the proposal, *Modern Physician* reported. The compromise included a \$500,000 cap on noneconomic damages, among other provisions. The publication quoted Jack Lewin, MD, chief executive officer of the California Medical Association, as saying, "The CMA believes if the Senate has a few more months to understand the issue and the importance of staying with a \$250,000 cap, it will develop a compromise more acceptable to more senators." For information on organized neurosurgery's efforts to pass the HEALTH Act, see "Ending the PLI Crisis," featured in this issue.
- **Congress Passes a \$54 Billion Medicare Physician Payment Fix** In a significant victory for organized medicine, on Feb. 13 the U.S. House and Senate passed the fiscal 2003 Omnibus Appropriations bill that includes language authorizing Health and Human Services to correct various errors the Centers for Medicare and Medicaid Services (CMS) made in calculating the Medicare physician fee schedule payment update. This "fix" will give physicians \$54 billion over the next 10 years, in addition to \$15 billion in administrative corrections that CMS has already implemented. Neurosurgery has about 1 percent of this "pot" of money, which translates into approximately \$690 million for neurosurgery over this 10-year period, or \$19,000 per neurosurgeon, per year. See the complete story in the Washington Update column in this issue.
- **HIPAA: Privacy Rule, Security Rule** The phase-in process for the Administration Simplification provisions of the Health Insurance Portability and Accountability Act (HIPAA) continues. Compliance with the Standards for Privacy of Individually Identifiable Health Information (Privacy Rule) is required as of April 14, 2003. The Final Rule for the Electronic Health Transactions and Code Sets (Security Rule) was published in the Federal Register on Feb. 20. Those who filed for extension of the Security Rule by Oct. 15, 2002, will not need to be compliant until Oct. 16. Additional information about HIPAA is available in the Medicolegal Update and Computer Ease columns in this issue or from the AANS HIPAA Resource Center, www.neurosurgery.org/aans/membership/hipaa.html.

Ending the PLI Crisis

With HEALTH, Neurosurgeons Put Their Money Where It Will Count

JAMES R. BEAN, MD

Neurosurgery is a liability-laden specialty. We know this because we treat the brain tumors and the head and spinal injuries, we perform the craniotomies and laminectomies, and we explain the traumatic quadriplegias and ischemic hemiplegias to distraught families. By virtue of the kind of work we do, the professional liability insurance (PLI) industry ranks neurosurgeons in the highest risk category.

We choose to live with this risk when we choose the specialty. The challenge attracts a personality type willing to take on the relatively high-risk, compared to other specialties, for the privilege of experiencing the great rewards of improving the quality of our very ill patients' lives.

But the risk has suddenly grown to absurd and unsustainable levels—not the risk of the neurological condition, but the risk of treating it. Annual liability premiums have increased from 25 percent to more than 100 percent: Never before have we faced liability premiums equivalent to one-quarter to one-half of personal earnings. The Council of State Neurosurgical Societies' 2002 survey of liability premiums showed that 43 percent of neurosurgeons are considering reducing services, 29 percent are planning early retirement, and 19 percent are considering relocation: Never before have we faced such a growing exodus of neurosurgeons from states, from types of practice, or from practice altogether, forced out by unaffordable premium costs, or by the loss of all coverage altogether. The fact is that today a \$1 million/\$3 million policy does not protect us against the average judgment or settlement for the type of case we treat: Never before has fear of personal consequences so dominated neurosurgeons' thinking.

The Washington Committee of the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS) has been working diligently to pass federal legislation that will set effective and fair limits on liability and preserve the availability in all states of neurosurgical services. In fact, the Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2003, which would, among other provisions, limit noneconomic awards in liability lawsuits to \$250,000, passed the U.S. House of Representatives on March 13. The debate now moves to the Senate, where we face an uphill battle. Even so, the political landscape for reform has never been better.

How Can We Pass the HEALTH Act?

To pass the HEALTH Act in the Senate, we must effectively tell our side of the story to every person who is or may be a patient: people who need the protection of available expert medical care, but who value the right to compensation for substandard care; that is, legis-

lators and their constituents. To do this, we must participate in a focused and organized public information campaign. Adequate funding is necessary for achieving our goal.

On March 14 the Washington Committee recommended that the AANS and CNS jointly fund a bold and aggressive public information campaign that will achieve effective federal medical liability reform. With this new funding resource, neurosurgery will lead by example and others will follow in a powerful bid to achieve passage of the HEALTH Act.

\$3/Day Can Say Goodbye to the PLI Crisis

The Washington Committee recommended that each neurosurgeon pay an assessment of \$1,000 per year for three years, if necessary, to pass the HEALTH Act. This war chest, combined with funds from other specialties and coalitions, will fund a public information campaign designed to build public opinion and political pressure to pass federal medical liability reform. Although the amount seems high, the lobby against the HEALTH Act is better funded, chiefly by the Association of Trial Lawyers of America, a source that is traditionally much more willing to give. Each neurosurgeon's contribution amounts to \$3 per day, only a small fraction of the current and future PLI premiums we face.

This funding campaign will, in fact, test the commitment of neurosurgeons to saving their practice and their specialty. Without full membership participation, there is no charge to lead, no campaign, and no end to the liability risk.

It's time to stop hoping the crisis won't affect me (it already does), to stop running and hiding from the enemy (there is no sanctuary), and to stop the rules of liability from destabilizing or destroying the practice of neurosurgery.

If we take charge of our future now, victory is within our grasp. If we fail by refusing our share of the burden, we choose capitulation. We must not fail. ■

James R. Bean, MD, is associate editor of the *Bulletin* and chair of the AANS/CNS Washington Committee. He is in private practice in Lexington, Ky.

For More Information Details of the PLI crisis, the HEALTH Act, and how you can contribute to successful resolution of the crisis are available at www.neurosurgery.org/socioeconomic/liabilityreform.html. For more information on advocacy campaigns, see "Managing the Message: The Neurosurgeon as Advocate," in the Fall 2002 issue of the *Bulletin*, www.neurosurgery.org/aans/bulletin/fall02.

AT ISSUE:

Clinical research

It's More Than Academic

“We live in an era of specialization, but specialization can be overdone and there is no inherent reason why the qualities of investigator, teacher, and practitioner should not go hand in hand, be represented in a single individual, and...be none the worse for the mixture.”

Harvey Cushing, MD, addressed these words to graduating students of Jefferson Medical College, Philadelphia, in 1926. In the intervening 70-plus years, the neurosurgery specialty has tended more and more toward subspecialization, a trend driven in large part by technological advances that continually increase the level of complexity of everyday practice.

In this climate, some understandably have come to view research that impacts the practice of neurosurgery as the realm of academicians specializing in clinical research. Others continue to see value in all neurosurgeons' continued participation, regardless of a particular neurosurgeon's practice type.

One such neurosurgeon, William H. Brooks, MD, discusses his experience with facilitating community-based, patient-oriented clinical research. “Becoming an active member of a community-based trial renews the dedication to clinical research that is a tradition of neurosurgery,” he writes in this issue of the *Bulletin*.

Dr. Brooks moves beyond the idea of neurosurgery's tradition with the view that “The common ground for patient-oriented community research is the community at large, where basic and translational research can be melded and evaluated as potentially therapeutically effective.”

This idea also underlies Translating Research Into Practice (TRIP), a two-stage initiative of the Agency for Healthcare Research



and Quality. TRIP II, funded in 2000, “focuses on implementation techniques and factors associated with successfully translating research findings into diverse applied settings.” The TRIP initiative was conceived in response to a “gap between knowledge and practice” such that “up to two decades may pass before the findings of original research become part of routine clinical practice.”

This issue of the *Bulletin* seeks to explore how neurosurgeons bridge “the gap” between research findings and clinical practice, as well as other matters related to research and practice. The *Bulletin* asked several neurosurgeons to contribute their experiences and viewpoints, resulting in an issue that offers a glimpse into how neurosurgeons view clinical research, how they are incorporating it into their practices, and what some of their concerns are with regard to study design and methodology.

This collage of neurosurgeons' ideas and experiences includes an article by Paul McCormick, MD, that explains why neurosurgery has taken issue with the Spine Patient Outcomes Research Trial (SPORT) and introduces the Stenosis Outcome Study (SOS). In

Continued on page 17

Conducting Clinical Research in Your Community

A Private Practitioner Encourages Others to Join In

WILLIAM H. BROOKS, MD

Many of the fruits of biomedical advances that neurosurgeons enjoy stem from research in many disciplines outside of neurosurgery. Most such advances are evaluated and proven to be effective through rigorous patient-oriented clinical research (POCR) studies. It may be suggested that the common ground for POCR is the community-at-large, where basic and translational research can be melded and evaluated as potentially therapeutically effective.

However, the community-based neurosurgeon in private practice who is interested in becoming engaged in POCR may be unfamiliar with how to develop such a project, and therefore reluctant to initiate and expand areas of personal interest that may be ideally suited for clinical research. The following template is presented as one example of how POCR can be successfully carried out, resulting in outcomes that potentially influence future surgical care.

A Case in Point

As just one example of neurosurgically related, community-based patient research, I was one of several researchers involved in a prospective, randomized comparison of carotid endarterectomy with carotid angioplasty and stenting in the treatment of carotid stenosis. Designing a protocol to adequately examine carotid stenting necessarily included neurosurgeons and cardiologists with endovascular experience; neurosurgeons with appropriate surgical expertise; neurologists and clinical nurses who provided independent clinical outcome assessment; manufacturers willing to provide stents without charge; and community hospital commitment and support. The results achieved from this community-hospital-based project have been published as the first study to demonstrate equivalency of these forms of treatment.

PI's Interest Is Paramount Developing a community-hospital-based research project begins with the interest of the principal investigator (PI), the clinical neurosurgeon. Organization of any POCR in the community will mature to a successful outcome largely depending upon the level of dedication, interest and time devoted to it by the PI. Partial interest and limited time-commitment translate to a doomed project.

Involve (Non-Neurosurgeon) Colleagues The next step is to recruit co-investigators. The collective involvement of an interested group of non-neurosurgical physicians, cardiologists, for example, ensures the inclusion of an unselected population of patients, in this instance with carotid stenosis, which enhances the acquisition of sufficient sample sizes to enable statistically reliable comparison of modalities. Inclusion of a variety of non-surgical colleagues will only enhance the potential for a successful project.

Inspire Support After organizing a consortium of interested physicians, the next goal is to entice the community hospital to "fund" the project. In this case, the hospital provided an ultrasonography laboratory, diagnostic and endovascular facilities, and

intensive care units that were dedicated to this project without generating charges to the patients. In addition, manufacturers provided the endovascular instruments and stents without cost to the hospital. Most community hospitals welcome a "single provider" association with manufacturers and pharmaceutical companies hoping to lower costs, which translates to maximal profits and minimal charges. Thus, the revenue "losses" for providing support to a community-based clinical research project can be easily recovered. "Losses" are translated into "gains" when the community recognizes that its hospital is a leader in delivering the "future of healthcare." Further, manufacturers and pharmaceutical companies relish becoming a "sole" provider to a community hospital.

Institute Independent Oversight The final facet of the template is the development of a means of independent oversight to determine that outcomes avoid the surgical bias that contributes to the loss of credibility and trust in the "real" outcomes of patients in the context of risk, quality of life, long-term efficacy, and relative cost. For example, for the carotid study a neurologist provided independent medical evaluations, and a nurse assessed other nonmedical outcomes such as return to normal activities.

A Plethora of Potential Topics

Application of this template to other areas of clinical research offers additional opportunities for the community-based neurosurgeon to become actively engaged in POCR. For example, the multiple issues of minimally invasive spinal surgery remain to be appropriately addressed in similar outcome trials. Acquisition of these data would provide the basis for suggesting or rejecting that these novel techniques replace current surgical approaches. Clinical trials organized and carried out in the community by a consortium of private practicing neurosurgeons advisedly include quality- and outcome-based assessments, epidemiologic and health services investigations, and evaluations of behavior modulation as related to prevention of recurrent disease as well as determining the efficacy of new treatments. These studies take on increased importance as third party payers and consumers demand accountability.

Neurosurgeons would do well to initiate a dialogue among community-based neurosurgeons and patients, educate their communities about the relevancy of POCR, and strive to make these endeavors understandable and exciting. Companies and community hospitals are much more likely to respond favorably to these projects if community-based physicians are knowledgeable, interested and devoted to organizing evidence-based outcome trials designed to specifically address new modalities. Becoming an active member of a community-based trial renews the dedication to clinical research that is a tradition of neurosurgery. ■

William H. Brooks, MD, is in private practice with Neurosurgical Associates PSC in Lexington, Ky.

Brooks WH, et al. "Carotid Angioplasty and Stenting Versus Carotid Endarterectomy: Randomized Trial in a Community Hospital." *J Am Coll Cardiol* 2001 Nov 15;38(6):1589-95. PubMed ID:11704367.

After ISAT: NATURE

North American Study Will Compare Endovascular and Surgical Treatments for Aneurysms

ADNAN I. QURESHI, MD, AND L.N. HOPKINS, MD

Every year an estimated 30,000 persons in the United States will experience rupture of an intracranial aneurysm resulting in subarachnoid hemorrhage (SAH), resulting in significant functional, social, and economic consequences. Almost half of the patients will survive the first year following SAH; more than half will not.

Until recently, surgical clipping to obliterate the aneurysm and reduce the risk of subsequent rupture has been the sole treatment option. Now with the recent development of endovascular treatment using Guglielmi detachable coils, two options for treatment of intracranial aneurysms are available.

A study comparing the efficacy of endovascular to surgical treatment of aneurysms was recently completed. The International Subarachnoid Aneurysm Trial (ISAT), involving centers located predominantly in Europe, reported a reduction in death and disability one year after treatment for patients with ruptured intracranial aneurysms who had undergone endovascular coiling compared to those who were treated with surgical clipping.

To provide a more in-depth comparison between the two treatment modalities and to illuminate the efficacy and associated risks of each, another trial is being planned: the North American Trial for Unruptured and Ruptured Aneurysms (NATURE), a prospective, multicenter study. The NATURE group, led by principal investigator L.N. Hopkins, MD, and Adnan I. Qureshi, MD, was formed approximately two years ago. The group includes nominated representatives from the AANS/CNS Section on Cerebrovascular Surgery: Robert E. Harbaugh, MD, Marc R. Mayberg, MD, Robert H. Rosenwasser, MD, Robert F. Spetzler, MD, and Philip E. Stieg, MD. In addition to neurosurgery, interventional neuroradiology is represented through members of the American Society of Interventional and Therapeutic Neuroradiology: John D. Barr, MD, Jacques E. Dion, MD, and Robert W. Hurst, MD.

During the past two years the NATURE group met several times to identify essential components of the study. The decision was made to limit the study to patients with ruptured aneurysms, excluding patients with unruptured aneurysms. The biggest challenge was developing a design that ensured the objective selection of patients with the least amount of investigator-to-investigator variability. The prime concern raised by experienced investigators was the possibility that most patients would not be randomized in the study, but rather treated outside the protocol. Another area of concern was ensuring that the time frame for post-treatment follow-up was of sufficient length to accurately evaluate the sustained benefit of endovascular or surgical treatment.

In light of these concerns, the strategies considered in the trial design included randomizing all SAH patients presenting to the study centers, and performing cerebral angiography for all treated patients at five years. In September 2002 Drs. Hopkins, Qureshi, Dion, Harbaugh, and Stieg discussed these strategies with a group

from the National Institute of Neurological Disorders and Stroke (NINDS) and John R. Marler, MD, associate director for clinical trials at NINDS. The approach of upfront randomization eventually was abandoned because of the possibility of inducing a large heterogeneity in the randomized population. Another strategy presently under consideration is the independent adjudication of all randomized and nonrandomized patients.

In the past few months, the Cerebrovascular Section critically reviewed the NATURE study and ultimately endorsed it based on the merit of the concept, and the commitment of the key investigators to work closely with the neurosurgical and interventional communities to develop an objective and unbiased trial. To be successful, however, the NATURE study will require devoted participation from the all neurosurgeons, together with interventional neuroradiologists. Without an intense level of commitment from both groups, any intracranial aneurysm trial may result in an inadequate assessment.

The results of clinical trials such as NATURE can have a profound effect on treatment protocols, reimbursement, and patient outcomes. Therefore, neurosurgeons and interventionalists must critically review the design of any study and participate with complete dedication.

The NATURE study is to be submitted to NINDS on June 1, 2003, for possible funding. Further information regarding the design, participation, and progress of the study can be obtained from Dr. Qureshi (aiqureshi@hotmail.com) or Dr. Hopkins. ■

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L.N. Hopkins, MD, is a neurosurgeon at Millard Fillmore Hospital in Buffalo, N.Y.

For Further Information

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Supporting Research

Three AANS Opportunities, One Goal

MANDA J. SEAVER

That the future of neurosurgery is directly related to the availability and quality of neurological research has been a tenet of the American Association of Neurological Surgery (AANS) since its inception. AANS supports ongoing neurological research through three opportunities—Neurosurgery Research and Education Foundation (NREF), the Van Wagenen Fellowship and Neuro-Knowledge™, to ensure that important, lifesaving neurological research continues.

When they perceived that severe cutbacks in federal funding threatened the continuation of medical research studies, foresighted AANS members created a foundation in 1981 known today as NREF. In the ensuing years, 75 grants amounting to more than \$3 million have been awarded to sustain basic science and neurosurgery programs in North America. This infusion of dollars has translated to support for promising residents who are preparing for careers in applied scientific research and has inspired young faculty members to conduct pilot studies and develop preliminary data to support applications for more permanent funding.

The Research Fellowships are one-year grants of \$40,000, or two-year grants of \$70,000 to help teach residents how to do research and set up their laboratories. The Young Clinician Investigator awards supply “seed money” of \$40,000 for one year to support a project in its initial stages.

Through 2002, 42 Research Fellowship, and 34 Young Clinician Investigator grants have been awarded. At the AANS Annual Meeting in April, NREF Chair Julian T. Hoff, MD, will present the 2003 NREF awards to five Research Fellows and three Young Clinician Investigators. In anticipation, Dr. Hoff commented, “When neuro-

surgeons serving on the award panels meet to review the applications, we cannot help but feel inspired by the enthusiasm of the next generation for our specialty and for the patients they mean to serve. AANS’ support of research in our field through NREF helps ensure that neurosurgery will continue to evolve as dramatically in these young neurosurgeons’ careers as it has in ours, creating a legacy of which we all truly can be proud.”

One foundation awardee now is professor and chairman of the Department of Neurosurgery at the University of Utah Hospital and serves on several AANS committees, including the Annual Meeting Committee and the *Journal of Neurosurgery* Editorial Board. In 1993 William T. Couldwell, MD, PhD, then at the University of Southern California, was honored as a Young Clinician Investigator for “Signal Transduction in Malignant Gliomas.”

“At that point in my career, the Young Clinician Investigator Award represented among other things an opportunity to make a contribution to the profession I hoped to serve, and to provide funding for work which would provide preliminary data to later apply for an NIH grant” said Dr. Couldwell. “Ten years later I appreciate both the importance of stimulating interest in neurological research through funding programs like NREF, and the necessity of supporting such funding through individual contributions that collectively have a powerful impact on the future of neurosurgery.”

Over the years supporters of NREF have created a capital endowment of \$5.6 million to ensure the continuation of neurological research. Individual supporters may specify a donation as a memorial to a loved one or a tribute to an esteemed colleague when they contribute to NREF. Industry partners may become Corporate Associates and enjoy the increased visibility that helps develop business. Other opportunities to support NREF include the fundraiser on Sunday, April 27, at 8:30 p.m., and the Silent Auction, April 28-30, both held during the AANS Annual Meeting in San Diego.

In addition to NREF, the AANS administers the William P. Van Wagenen Fellowship, established by the estate of Dr. Van Wagenen, who was one of the founders and the first president of the Harvey Cushing Society, now AANS. The 2003 Van Wagenen Fellowship was awarded to Odette A. Harris, MD, a resident in the Department of Neurosurgery, Stanford University Medical Center. The annually awarded Van Wagenen Fellowship is intended to provide freedom in scientific development without the restrictive limitations imposed by many research grants and fellowships, provides a \$45,000 stipend for living and travel expenses during post-resident neurosurgical study in a foreign country for a period of six to 12 months. Dr. Harris will examine the current protocols and practices of traumatic brain injury management in Jamaica and analyze outcomes compared to those in an urban indigent setting in the United States.

The AANS also provides research opportunities for AANS members through its Neuro-Knowledge partnership with Outcomes Sciences. For more information, see the related article in this issue. ■

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

● **When Are Applications for 2004 NREF Awards Available?**
Available online May 1. Due Oct. 31.

● **When Are Applications for 2004 Van Wagenen Fellowships Available?**
Available online April 1. Due Oct. 1.

● **How Can I Make a Donation to NREF?**
Individual donors can use the online donation form on the secure server at www.neurosurgery.org/aans/research/fundform.html#form, or contact AANS.

● **Silent Auction Benefiting NREF**
April 28-30, 2003, during the AANS Annual Meeting

● **NREF Fundraiser**
Sunday, April 27, 2003, 8:30-11:00 p.m., during the AANS Annual Meeting

● **For More Information or to Make a Donation**
www.AANS.org > Research Foundation
info@AANS.org or (888) 566-AANS

Neuro-Knowledge™ Research Partnership

Neurosurgeons and Clients Share in Opportunity

MANDA J. SEAVER

An innovative partnership launched in 2001 brought clinical research into the 21st century by means of a Web-based data network. Neuro-Knowledge™, a collaboration of the American Association of Neurological Surgeons (AANS) and Outcome Sciences Inc., provides a convenient means for both private practice and academic neurosurgeons across the United States to participate in a variety of clinical research opportunities. Neuro-Knowledge additionally offers its clients in industry, academia and government a time- and cost-efficient, method for generating reliable data.

“For neurosurgeons, Neuro-Knowledge offers the opportunity to take part in many types of clinical research while enjoying generous compensation, while vendors and others need access to neurosurgical expertise and a wide range of types of data, as well as first rate data,” said Robert E. Harbaugh, MD, chair of the AANS Neuro-Knowledge Committee. “Neuro-Knowledge is the link that facilitates cost-effective, quality clinical research, in the end resulting in improved neurosurgical care.”

The first Neuro-Knowledge project, an opinion survey for a product used in lumbar disc procedures, illustrates how the network functions for the benefit of neurosurgeons, clients, and patients. A manufacturer wanted feedback from the marketplace regarding the efficacy of its lumbar disc product. It had surveyed its own client database and received positive feedback, but realizing that the information could be skewed toward a false positive, was looking for a broader range of expert opinion. The manufacturer hired a private market research firm to conduct a survey, but over a six-week period the firm experienced difficulty achieving the required number of respondents.

Then Neuro-Knowledge was engaged to recruit respondents for a telephone survey. Neuro-Knowledge contacted its registry of neurosurgeons via e-mail asking if they would participate in the survey. The recruitment goal was met within 48 hours, shaving eight days off of the 10-day recruitment period that had been allotted. Participating neurosurgeons were reimbursed for their time, and the client was pleased with both the remarkable speed and rate of response. The product was not rated highly by neurosurgeons, refuting the client’s prior internal research and providing valuable information for improving the product in the future.

“While we are as pleased as the client at the success of this survey, it really represents the tip of the iceberg as to what Neuro-Knowledge can accomplish,” said Richard E. Gliklich, MD, president of Outcome Sciences. “Our innovative data collection system can power clinical trials, including recruitment of investigators and data management, and observational studies such as registries and outcomes studies, in addition to opinion research.”

He explained that Outcome Sciences brings to the partnership the infrastructure for conducting research today. Based upon a state-of-the-art, Internet-based data capture system, data manage-



The screenshot shows a web browser window displaying the registration page for the Neuro-Knowledge Network. The URL is www.outcomesciences.com. The page title is "Partner Programs > Neuro-Knowledge". Below the title, it says "PERSONAL REGISTRATION FOR:" followed by "NEURO-KNOWLEDGE™ NETWORK". There is a link that says "Click to Learn About Neuro-Knowledge!". The form includes input fields for "First Name" and "Last Name". Below these, there is a section titled "Types of Programs that interest you:" with several checkboxes: "Surveys", "Registry", "Clinical Trials", "Expert Panels", "Speaker Opportunities", "Other", and "All". At the bottom of the form are two buttons: "Clear Form" and "Submit".

ment is automated and compliant with all provisions of the Health Insurance Portability and Accountability Act. It additionally offers expertise in study design and management, opinion research and survey methodology, biostatistics, data analysis and reporting.

The AANS offers the concentrated experience of the world’s largest neurosurgical society, counting among its membership nearly 92 percent of all neurosurgeons certified by the American Board of Neurological Surgery, the Royal College of Physicians and Surgeons (Neurosurgery) of Canada, or the Mexican Council of Neurological Surgery, AC. These private practice and academic neurosurgeons contribute their proficiency in all areas of neurosurgery and neurosurgical trial design.

The expertise represented by Neuro-Knowledge ensures a high level of confidence in the quality of research. By continually inspiring this level of confidence in potential clients and researchers, Dr. Gliklich and Dr. Harbaugh hope to meet the Neuro-Knowledge mission: to improve the understanding of neurosurgical disease and its treatment by providing the highest quality research services to its clients.

Neuro-Knowledge Services

In addition to conducting relatively rapid and low-cost surveys, Neuro-Knowledge can recruit neurosurgeons, epidemiologists and statisticians to create a clinical trial design “from concept to protocol,” or simply to consult on a client’s project design. It also can completely manage a clinical trial for a client, including identifying and recruiting investigators, contracting with trial sites, creating procedures and developing appropriate oversight panels.

Neuro-Knowledge’s “real time” data management tools can produce randomization and audit trails, facilitate communication among investigators and manage group documents, and generate e-

mail reminders prompting data submission. Data can be submitted and captured online, speeding statistical data analysis. Once the analysis is complete, Neuro-Knowledge can prepare the final report for internal or external release.

All services are offered in an articulated package, or they can be contracted independently of one another.

“Neuro-Knowledge really can be thought of as a full service provider for neurosurgical research,” said Dr. Gliklich. “We can put an entire study together, manage it and all the data, including creating any necessary forms, put together an oversight group, perform data analysis, and produce a report, or we can support any part of a study with our expertise.”

Six Flags Commission: “Roller Coaster” Study

In 2002 Neuro-Knowledge accepted a commission from Six Flags Inc. to evaluate whether fixed site theme park rides pose a risk of neurological injury to riders.

“If Six Flags had put together its own study, the credibility of the findings would have been questioned,” Dr. Harbaugh said.

Dr. Gliklich agreed, “Third party research puts them at arm’s length.”

Six Flags released results of the study at a January press conference in Washington, D.C. In a prepared statement, Dr. Harbaugh noted: “All parts of our work were completely independent of Six Flags. There were no restrictions on the scope of our inquiries. Our mandate was to thoroughly evaluate the question and to find the truth, whatever that might be.”

Study methodology involved convening a panel of neurosurgeons and others with expertise in cerebrovascular disease, neurological trauma, medical neurology, emergency medicine, clinical epidemiology, biostatistics, and roller coaster engineering to review all available data. The data sources included a national survey of neurosurgeons, medical literature and case reports selected by an experienced medical librarian conducting a Medline search, and the U.S. Consumer Product Safety Commission.

As Dr. Harbaugh reported, “The panel concluded that there are no data available establishing a causal link between g-forces on amusement park rides and neurological injury.” However, the panel also determined that the literature and other data sources reviewed were “clearly inadequate as a basis for conclusions and recommendations” and proposed that additional study, based on yet-to-be-collected, reliable data, be undertaken.

In light of this finding, Six Flags said that it would support prospective, ongoing research into any connection between neurological injury and fixed site theme park rides through an ongoing relationship with Neuro-Knowledge. Gary Story, president and chief operating officer of Six Flags Inc., announced: “Six Flags [will] report any head injury data from all Six Flags properties to a monitoring board assembled by Neuro-Knowledge and the AANS. In addition, this board will develop and implement a national hospi-

tal and physician-based surveillance program to identify and track the occurrence of non-traumatic brain injuries.”

In addition to providing an evidence-based analysis of the relationship between neurological injury and fixed site theme park rides and inspiring additional investigation of the subject, the study generated intense media coverage, with related articles reaching an estimated audience of 20 million people.

Getting Involved in Neuro-Knowledge

“As a neurosurgeon, I see incredible value for our specialty and for our communities in conducting clinical research,” said Dr. Harbaugh. “As a member of AANS, I appreciate that Neuro-Knowledge not only provides an avenue for neurosurgeons to serve as investigators, regardless of the type of practice they are involved in, but also that they are compensated for their time. I also recognize that developing revenue sources like the Neuro-Knowledge program can keep our membership dues from increasing and contribute to the ongoing health of the AANS.”

Neurosurgeons can register for Neuro-Knowledge online at www.outcomesciences.com by selecting Partner Programs from the menu and choosing Neuro-Knowledge.

“Registering with Neuro-Knowledge carries no obligation,” said Dr. Gliklich. “When we are recruiting for a new study, we contact appropriate registrants with a proposal and approximate compensation, so they always have the opportunity to consider whether or not they are able to participate.”

Additional information about Neuro-Knowledge is available online, or from Dr. Harbaugh or Dr. Gliklich, (888) 526-6700 within the United States only, or info@outcomesciences.com. ■

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

For Further Information

- Where to Register for Neuro-Knowledge
www.outcomesciences.com > Partner Programs > Neuro-Knowledge
- Neuro-Knowledge Online
www.neurosurgery.org/aans/membership/neuroknowledge.html
- Fixed Site Theme Park Rides and Neurological Injuries
www.neurosurgery.org/aans/media/detail.asp?PressID=187
- Fixed Theme Park Rides and Neurological Injuries: Expert Panel Consensus Report
www.emerson-associates.com/safety/articles/AANSreport.pdf
- Statement by Robert E. Harbaugh, MD, on “Fixed Site Theme Park Rides” Findings
www.emerson-associates.com/safety/statements/Harbaugh_statement.pdf

Incorporating Research Into Practice

How One Neurosurgeon Handles Progress

BRETT A. SCOTT, MD

Like other neurosurgeons, I strive to provide my patients with the best and most up-to-date care. While neurosurgery itself is a challenging profession, an additional challenge is staying current with the constant changes in how we practice. I do things in my practice now that I did not learn in my residency during the 1980s. There are many reasons for these changes, including research and development of new and innovative treatment protocols, better surgical tools and techniques, and better understanding of disease processes. In this era of evidence-based medical practice, quality research is necessary to demonstrate efficacy and update practice patterns.

Reviewing Neurosurgical Literature

There are numerous sources of research information available to the practicing neurosurgeon. Peer-reviewed neurosurgery and spine surgery journals are my primary sources of information. The *Journal of Neurosurgery*; the *Journal of Neurosurgery: Spine*; *Neurosurgery: Spine*; and *The Spine Journal* are my primary references. While these publications contain both clinical research and basic science research studies, I find that the clinical studies are most beneficial to my practice.

It is common for me to read an article that either causes me to change some aspect of my practice or validates what I already do. Consider surgical treatment of atlanto-axial instability. When I finished training, posterior wiring techniques with halo stabilization were the options. Transarticular lateral mass screw fixation was introduced, but it was technically challenging. Then I read a study reporting atlanto-axial fixation with lateral mass screws in the atlas, and pars interarticularis screws in the axis. I began using this technique with good success, and subsequently further studies were reported demonstrating efficacy in a large clinical trial, as well as biomechanical strength comparable to transarticular fixation.

Comprehensive topic review articles are available from a number of sources, and I find that these are extremely valuable. Currently I read: *Contemporary Neurosurgery*; *Contemporary Spine Surgery*; *Techniques in Neurosurgery*; *Neurosurgery Quarterly*; *Neurosurgery Clinics*; and *Seminars in Neurosurgery*. While a journal article may report research on one aspect of a problem, the review article can summarize available literature on multiple aspects of a given topic, direct one to specific references on the subject, and provide expert commentary and opinion. I find myself consulting review articles particularly when I am confronted with an uncommon problem. In addition, some of these publications, for example *Contemporary Neurosurgery* and *Contemporary Spine Surgery*, offer an opportunity to earn continuing medical education credits, which I find valuable in my busy practice.

Participating in Annual Meetings and Courses

Specialty meetings such as the annual meetings of the American

Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons provide a forum for the dissemination of research information. Although presentations are relatively brief and are not peer-reviewed, the material presented at meetings is likely to be the most current information available, and it is possible to learn a great deal about current trends in neurosurgical practice.

Specialty courses offered at the annual meetings give the participant an opportunity to learn new information and obtain hands-on experience with surgical techniques. I participated in a practical clinic offered at an AANS annual meeting to learn both posterior cervical spine lateral mass screw fixation and anterior cervical spine plate fixation. When I finished residency training, the Caspar anterior plate was just starting to be used for anterior cervical spine stabilization. Over several years other anterior cervical plates were developed using unicortical screws making placement less difficult and dangerous. Soon, lab studies were reporting biomechanical strength of converging unicortical screws equivalent to the bicortical screw placement used with the Caspar plate. Also, clinical studies demonstrated that anterior cervical fusion with allograft and plating was as successful as fusion with autografts, but without graft site morbidity or external bracing. A specialty course provided me with the education and experience I needed to be able to incorporate anterior plate fixation into my practice.

As new techniques and devices are developed and described in the literature, I try to analyze them critically. Some are clever or ingenious solutions to a problem, yet I think it is prudent to carefully evaluate the research literature before changing my practice. In the early 1990s there were reports describing a new posterior cervical fixation device that was simpler and safer to use than sublaminar wiring. Halifax clamps were marketed and were at least temporarily popular. Then clinical studies began to appear identifying a problem with the clamps loosening and failing to maintain fixation of the spine. About this time, laboratory biomechanical studies as well as clinical studies reported the advantages and successes of lateral mass plating for posterior cervical fusions. The advent of lateral mass plating has relegated Halifax clamps to the museum. After extensive literature documented the safety and efficacy of lateral mass plates, I learned the surgical techniques by first consulting many review articles and then attending a hands-on course at an AANS annual meeting.

Research is indispensable in my practice. As I tackle increasingly complex problems, it is the experience of other surgeons, reported in the form of clinical and basic science research, that helps me do the best for my patients. Comprehensive topic review publications are my most efficient educational tool because they cover multiple aspects of a problem, refer to appropriate literature and many offer continuing medical education credits. ■

Brett A. Scott, MD, is in private practice with Neurosurgical Associates PSC in Lexington, Ky.

Studying SPORT

Neurosurgeons' Concerns Culminate in a New Spine Study

PAUL McCORMICK, MD, MPH

In late 1999 the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) of the National Institutes of Health (NIH) announced the funding of the Spine Patient Outcomes Research Trial, known as the SPORT study.

In a well-publicized press release, the director of NIAMS, Stephan Katz, MD, stated, "Based on this [SPORT] trial we shall, for the first time, have scientific evidence regarding the relative effectiveness of surgical versus nonsurgical treatment of herniated lumbar disc, spinal stenosis, and degenerative spondylolisthesis."

The \$13.5 million dollar grant for the SPORT study closely coincided with the federal Agency for Healthcare Research and Quality's publicly financed, evidence-based report entitled Treatment of Degenerative Lumbar Spinal Stenosis. After an exhaustive review and epidemiological analysis of published peer-reviewed literature, the report concluded, "Definitive evidenced-based statements about the treatment of spinal stenosis await the results of well-designed clinical trials."

This report cited severe limitations in the quality of the design and execution of the studies published thus far, noting that only seven of 147 trials examining surgical treatment of spinal stenosis were randomized controlled trials. It further concluded, "Well-designed randomized clinical trials provide the highest quality of evidence for treatment effectiveness because each treatment arm is composed of comparable patient groups having the same characteristics. Nonrandomized trials may result in one treatment arm having patients who can appear to respond better or worse to treatment due to the characteristics of the patient group (i.e. selection bias or confounding)."

About SPORT

The SPORT study is a prospective, randomized, multicenter trial comparing surgery to nonoperative management for herniated lumbar disc, spinal stenosis, and degenerative spondylolisthesis. The study will enroll 1,450 patients at 11 orthopedic spine centers over a five-year period. Pre- and post-operative outcomes will be assessed using validated measurement instruments (for example, the SF-36 physical function subscale, and the Oswestry Disability Index). An "intent-to-treat" analysis will be utilized.

The stated power of this study, assuming a treatment effect magnitude of 10 points on the SF-36 questionnaire and a 20 percent "loss to follow-up," is 85 percent. Analysis of the data to estimate the cost-effectiveness of surgical versus nonsurgical treatment also is planned, as is a concurrent prospective, observational cohort study of those patients who decline randomization. The principal investigator is James Weinstein, DO, of the Center for the Evaluative Clinical Sciences at Dartmouth Medical School.

Neurosurgery Identifies Concerns

Representatives from the American Association of Neurological

Surgeons (AANS), Congress of Neurological Surgeons (CNS), and the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves had the opportunity to review the design of the SPORT study. After thorough analysis, three main areas of concern were identified: hypothesis and data analysis; generalizability; and power.

Hypothesis and Data Analysis The SPORT study was designed to address the broad study hypothesis, *Is surgery a more effective treatment for lumbar disc herniation, lumbar stenosis, and/or degenerative spondylolisthesis than nonoperative treatment?* It was not designed to validly assess the more relevant question of which patients are most likely to benefit from a specific treatment, and therefore will not be able to do so. Nor will it identify factors that may influence outcome, irrespective of treatment. Essentially, such a broad study hypothesis assumes both a homogeneous patient population in each diagnostic group as well as a uniform response to treatment. In reality, there is significant heterogeneity with respect to clinical presentation (duration, type, distribution, severity of symptoms), natural history, radiographic characteristics, psychosocial covariates (worker's compensation, depression, litigation), and response to surgery for all of the conditions under study.

Indeed, class II evidence from prospective observational trials, further supported by empirical clinical experience and class III evidence, has established that the effects of a specific treatment for each condition under study are not uniform. Some patients benefit more than others. Some benefit not at all. This strongly suggests that other factors are associated with treatment outcomes, independent of the treatment. Numerous studies have shown that treatment outcomes are associated with specific defined characteristics and variables for each of the conditions under study.

In the case of herniated lumbar disc, for example, treatment outcomes may be associated with symptom location, distribution, severity, and duration, radiographic characteristics (bulge, protrusion, extrusion, sequestration), and psychosocial covariates (worker's compensation, personal injury, depression). For lumbar stenosis treatment, outcomes may be associated with symptom severity and distribution, radiographic characteristics, medical co-morbidities such as diabetes, hip arthritis, and cardiovascular disease, as well as self-reported general health perception. For lumbar stenosis with degenerative spondylolisthesis, outcomes are additionally associated with whether or not fusion has been performed.

While the prospective, randomized study design will assure equal distribution of these factors across each treatment group, it will not specifically control for the independent effect of any variables on treatment outcome. Therefore, the true benefit of surgery may be underestimated or totally obscured. If, for example, surgery clearly benefits those patients with more severe symptoms while patients with milder symptoms benefit more from nonoperative care, based on the SPORT study design it is possible that these ben-

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efits will, in effect, cancel each other out. In essence, there will be a failure to reject the null hypothesis of no difference between surgery and nonoperative care for the conditions under study. Such a conclusion would not only be specious, but would disproportionately affect surgery and the patients with severe symptoms who are most likely to benefit from it.

Such a concern can only be addressed through stratified analysis within and between treatment groups to control for the effects of these variables. Unfortunately, since no subgroups are identified a priori in the SPORT study design on the basis of baseline characteristics or variables known to be associated with treatment outcomes, the SPORT study will neither identify nor quantify differences in treatment effects or benefits both within and between treatment groups based on these characteristics and variables. At best, these subgroups only will be identified and analyzed through secondary post hoc data analysis. Such after-the-fact analysis is fraught with methodological shortcomings and is often given little credence by methodologists and policy makers.

Ultimately, based on the broad nature of the study hypothesis and methods of data analysis, the SPORT study may not only underestimate or totally obscure the benefit of surgery in clearly identified subgroups, but it will fail to validly address the more important research question of which patients are most likely to achieve the greatest benefit from which specific treatment.

Generalizability With respect to generalizability there are two main questions. First, are the patients who agree to randomization different from those who do not in ways that are associated with treatment outcomes? The SPORT study will be able to control this to some degree through comparison with the observational trial cohort, but it is unclear what conclusions will be made if differences between the study groups are found.

This is of particular concern because of the widespread beliefs and established practice patterns related to the conditions under study. In the real world, surgical and nonoperative treatments are neither viewed interchangeably nor applied uniformly to the conditions under study. Patients with more severe symptoms are selected for—and ultimately choose—surgery, while patients with mild symptoms are usually managed with nonoperative care. In addition, irrespective of symptom severity the vast majority of patients are initially managed with nonoperative care. Most patients are offered and elect to undergo surgery only after a trial of nonoperative care fails to resolve their symptoms.

Based on these well-established perceptions and practice patterns, a concern is that a disproportionate number of patients with severe symptoms (that is, those most likely to benefit the most from surgery) will not be referred to the SPORT study centers; will not be offered or will not accept randomization but will opt for surgery if referred to the study centers; or will cross over to the surgical arm following randomization. All of these occurrences would serve to further underestimate the benefit of surgery in the

randomized arm of the SPORT trial.

Secondly, do the orthopedic surgeons participating in the SPORT study utilize similar diagnostic and surgical selection criteria for lumbar disc herniation, spinal stenosis, and degenerative spondylolisthesis as neurosurgeons? And, in a similar vein, do they determine the surgical objective and successfully achieve the surgical objective in a manner and at a rate similar to that of neurosurgeons? These questions have not yet been adequately addressed.

Power The issue of power relates to SPORT's use of an "intent to treat" analysis. Specifically, this is a compliance issue since up to 25 percent of patients randomized to nonoperative treatment will be non-compliant and will cross over to the surgical treatment arm. Any improvement in this group will be credited to nonoperative treatment. While such analysis does not affect the validity of SPORT's findings, it may reduce the ability to detect a difference between treatments when in fact a difference truly exists. What is not clear from the study design is whether the anticipated 25 percent crossover rate was included in the calculation of the needed sample size to achieve the stated 85 percent probability of detecting a true treatment difference.

In summary, based on the heterogeneous nature of the conditions under study, the widespread beliefs and established practice patterns related to the treatments of these conditions, and some elements of the SPORT study design, the concern is that the benefits of surgical treatment will be underestimated at best, or totally obscured by the results of the SPORT study at worst. In the end, the concern is that the NIH will spend \$13.5 million dollars on a highly publicized but underpowered and "biased toward the null" study that likely will fail to identify a difference between surgical and non-surgical treatments when, in fact, a difference truly exists.

Further compounding the problem, public agencies and third party payers may interpret results of the SPORT study in such a way that there will be a disproportionate and unfair impact on the surgical options for these conditions, with the result that many patients may be denied the more appropriate and effective treatment.

Neurosurgery Responds With a New Study

The AANS Board of Directors, in conjunction with the executive committees of the CNS and the Spine Section, has responded to the SPORT study on several levels. First, neurosurgery's concerns regarding the design and likely outcome of the SPORT study have been articulated both in a letter and in person to Dr. Weinstein. Secondly, neurosurgical representation is now in place on the SPORT study Data and Safety Monitoring Board.

Finally and most importantly, neurosurgery's concerns with the SPORT study are being addressed through the development of a new study called the Stenosis Outcome Study (SOS). Under the direction of the Spine Section, this prospective, randomized efficacy study is now being planned to validly assess the hypothesis, *Is surgery more effective than nonoperative management for patients*

with moderately severe and severe lumbar spinal stenosis?

Strict exclusion criteria will assure that only the most ideal surgical candidates qualify for randomization. The study has been funded by contributions totaling \$80,000 from the AANS, CNS, and the Spine Section and should be completed in two years. Mark Hadley, MD, who developed the study protocol, and Paul McCormick, MD, will be the principal co-investigators. ■

Paul McCormick, MD, MPH, is professor of clinical neurosurgery at the New York Neurological Institute and a member of the AANS Board of Directors.

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For Further Information

- Agency for Healthcare Research and Quality: www.ahrq.gov
- NIAMS press release on SPORT: www.niams.nih.gov/ne/press/1999/09_20.htm
- NIH Clinical Trials: <http://clinicaltrials.gov>
- SPORT Web site: <http://sport.dartmouth.edu/nsn>

Continued from page 8

addition, the development process of a new study, the North American Trial for Unruptured and Ruptured Aneurysms (NATURE), is described in an article by principal investigators Adnan I. Qureshi, MD, and L.N. Hopkins, MD.

Brett A. Scott, MD, illustrates how he incorporates research into his private practice using resources like peer-reviewed journals, annual meetings and courses. Robert E. Harbaugh, MD, and Richard E. Glicklich, MD, discuss how AANS paves the way for neurosurgeons to participate in research studies in an interview on the AANS Neuro-Knowledge™ program. The question of funding is touched upon in an article describing AANS' avenues of support for clinical research.

With this issue the *Bulletin* seeks to stimulate neurosurgeons' feedback, both from the approximately 22 percent of AANS members who are affiliated with medical schools or academic health centers, and particularly from the balance of members who are not. How do you access and incorporate research into your practice? Is it beneficial—and possible—for a neurosurgeon today to be investigator, teacher, and practitioner, as Dr. Cushing suggested? Let us know what you think at the *Bulletin*, bulletin@aans.org. ■

Congress Halts Cuts in Medicare Fees

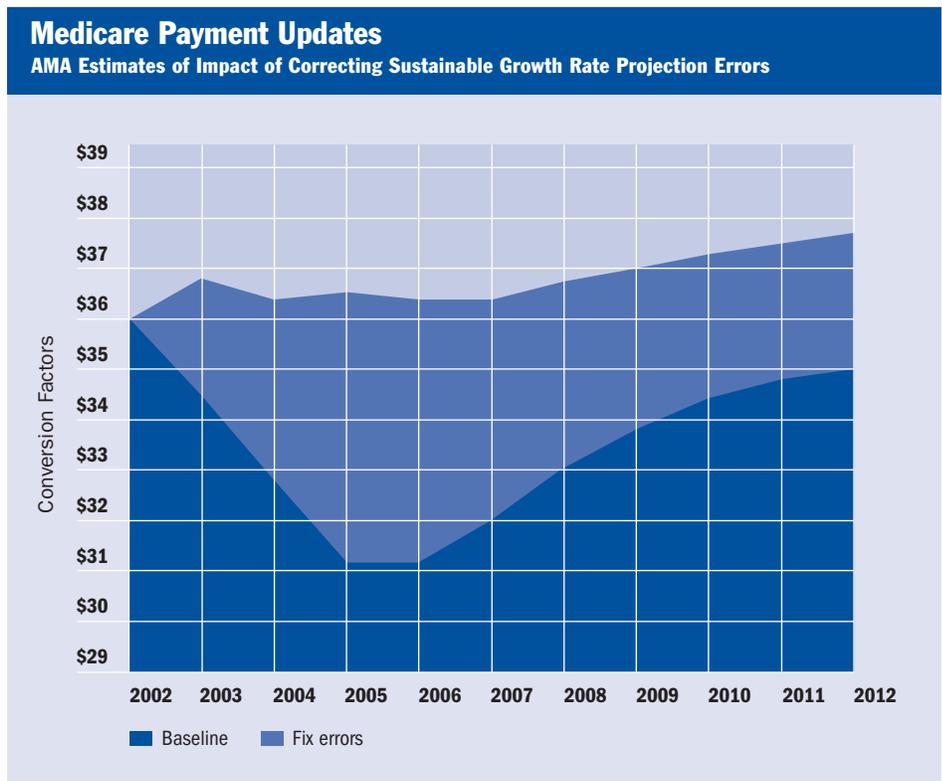
Neurosurgeons Gain a Little, Gear Up to Change Medicare’s Formula

Following a long and hard fought battle, the U.S. Congress enacted legislation to prevent the 4.4 percent reduction in Medicare physician fees that would have been implemented on March 1. If Congress had not acted, this cut would have been in addition to last year’s 5.4 percent reduction in Medicare fees.

As a result of Congress’ action, the Centers for Medicare and Medicaid Services (CMS) was authorized to correct various errors in its previous estimates of physician spending, and the conversion factor for all physician services for 2003 has been increased by 1.6 percent. This legislative change means that over the next 10 years an additional \$54 billion will be “put back” into physician payments. When coupled with \$15 billion already returned to physicians when CMS made certain changes to the formula for calculating the annual Medicare conversion factor, this translates into \$69 billion from 2003 to 2012. This is *real* money.

The Medicare Payment Updates chart depicts what would have happened (“baseline”) had Congress not acted, versus what should happen in the future now that CMS has corrected its mistakes (“fix errors”).

What this means for neurosurgery: Doing “back of the envelope” calculations (which are not entirely accurate and representative of what will be paid to each neurosurgeon) we have about 1 percent of this “pot” which equals about \$690 million total for neurosurgery over this 10-year period. This further translates into \$69 million each year, or about \$19,000 per neurosurgeon, per year (assuming 3,600 neurosurgeons). Considering that private payers often tie their reimbursement rates to the Medicare rate, the positive financial effects should be even greater.



The 2003 Medicare fee schedule does include some additional changes in the practice expense relative value units for neurosurgery (and some other technical changes), which resulted in an overall 1 percent reduction in neurosurgical fees (note that some procedures were cut more than others because of these additional changes). Thus, the net effect for neurosurgery is an overall increase in reimbursement from 2002 to 2003 of 1 percent. The National Medicare Payment Rate chart (opposite page) shows the Medicare payment rates for key neurosurgical services over time.

While the changes in the per service reimbursement rates may seem small, one must keep in mind that the money put back into the system is spread out over a

10-year period and helps alleviate the 16 percent to 19 percent cut that neurosurgeons would have seen had Congress not acted. Thus, in typical Washington fashion, we are not really seeing increases, but rather preventing further decreases—on balance, this is certainly better than nothing!

All is not won yet, however. Congress’ action did nothing to fix the underlying problems with the formula for calculating Medicare payments, which is still tied to gross domestic product. With the dismal economic forecasts, further reductions may be likely. We will be working this year to try to achieve changes in the formula to help address this situation. ■

Katie O. Orrico, JD, is director of the AANS/CNS Washington Office.

National Medicare Payment Rate

CPT Code	Procedure	1992	1997	1998	1999	2000	2001	2002	2003
22554	Ant cerv fusion	\$1,354	\$1,662	\$1,539	\$1,416	\$1,450	\$1,443	\$1,306	\$1,352
22612	Lumbar post-lat fusion	1,255	1,801	1,648	1,533	1,549	1,582	1,449	1,421
22630	PLIF	1,389	1,705	1,557	1,464	1,526	1,579	1,471	1,421
22842	Lumbar pedicle screws	1,414	842	754	724	779	825	776	784
22845	Ant cerv instrumentation	1,138	761	682	668	766	828	744	751
22851	Intervert biomech device	N/A	580	520	484	499	511	411	415
35301	Carotid endarterectomy	1,093	1,436	1,320	1,220	1,236	1,228	1,061	1,074
61107	Twist drill- ventric	540	485	431	391	383	377	331	346
61154	Burr hole for SDH	1,087	1,411	1,275	1,160	1,159	1,132	994	1,020
61312	Crani for subdural	1,605	2,065	1,950	1,787	1,820	1,792	1,598	1,654
61313	Crani for ICH	1,600	2,086	1,957	1,800	1,836	1,815	1,620	1,662
61510	Craniotomy for tumor	1,807	2,405	2,216	2,040	2,085	2,058	1,840	1,892
61512	Crani for meningioma	1,913	2,778	2,546	2,369	2,480	2,486	2,259	2,315
61700	Craniotomy for aneurysm	2,358	3,509	3,224	3,059	3,359	3,448	3,226	3,287
61751	Stereotactic biopsy	1,311	1,660	1,520	1,376	1,354	1,320	1,162	1,175
61793	Radiosurgery	1,307	1,639	1,400	1,290	1,326	1,303	1,152	1,165
61795	Intraop frameless stereotaxis	246	444	368	331	305	292	253	255
62223	VP shunt	1,044	1,285	1,103	1,004	997	981	868	881
62230	Shunt revision	698	875	814	754	778	775	690	731
62362	Programmable pump implant	N/A	443	425	408	430	456	433	440
63030	Lumbar discectomy	966	1,205	1,028	946	950	957	874	844
63042	Recurrent lumbar disc	1,461	1,763	1,507	1,376	1,348	1,349	1,214	1,188
63047	Lumbar laminectomy	1,408	1,408	1,290	1,177	1,136	1,143	1,037	1,010
63075	Ant cerv discectomy	1,126	1,609	1,475	1,373	1,431	1,455	1,338	1,312
63081	Ant cerv corpectomy	1,685	2,164	1,993	1,824	1,833	1,818	1,624	1,581
63650	Perc epidural dorsal column stim	596	647	597	524	463	439	369	374
64718	Ulnar nerve transposition	435	546	503	469	464	475	440	447
64721	Carpal tunnel	317	398	361	349	361	397	399	387
99243	Office Consultation	81	94	102	103	117	118	116	117
	Conversion Factor	\$31.00	\$40.96 ^{surgical} \$33.85 ^{nonsurg.}	\$36.69	\$34.73	\$36.61	\$38.26	\$36.20	\$36.78

In the Hands of Masters

First Master Series Course Teaches Advanced Endoscopic Techniques

The American Association of Neurological Surgeons (AANS), in partnership with the Medical Education and Research Institute (MERI) in Memphis, Tenn., held its first AANS Master Series course Jan. 31–Feb. 1. “Advanced Endoscopic Surgical Procedures” provided advanced training in endoscopic surgical procedures in conjunction with hands-on clinical lab experiences following each didactic session. Sessions included techniques and indications on the following topics:

- Third Ventriculostomy
- Colloid Cyst
- Image-Guided Parenchymal Tumor Biopsy
- Intraparenchymal Hematoma Evacuation
- Carpal Tunnel Release

This exceptional program was chaired by John Frazee, MD, and it was supported by the following distinguished faculty members: Rick Abbott, MD, Marvin Bergsneider, MD, David Jimenez, MD, Wesley King, MD, and Roland Young, MD.

“Members of the faculty went out of their way to comment on how enjoyable this course was to teach,” commented Dr. Frazee. “This advance neuroendoscopy course was praised by all of the attendees.”

Significantly adding to the value of the course was the opportunity for attendees to determine which surgical equipment best fit with their individual surgery styles; they were able to perform the procedures using each of the different types of equipment supplied by Aesculap, Medtronic, Storz, and Brain Lab. In addition, participants were able to visit with several exhibitors who generously sup-



Faculty member Rick Abbott, MD, demonstrates a procedure while Ian Heger, MD, (right) looks on during the first AANS Master Series course, “Advanced Endoscopic Surgical Procedures.” Tom Poss of Medtronic is at the monitor. The next AANS Master Series course, “Innovations in Spinal Fixation: An Advanced Course,” is scheduled for July 26-27, 2003.

ported the course during the breaks and over lunch.

Endoscopic course participant Karl Greene, MD, observed that “Neurosurgery, like all of medicine, is dynamic and in constant transition toward improvement. This course convinced me to stay open-minded about endoscopic surgical approaches....”

The daytime course was complemented by a dinner that allowed the course’s faculty and attendees time for discussion of difficult cases, as well as a relaxed question and answer session.

“I was able to learn the techniques from the people who write about them,” another participant stated. “What’s more, I was able to learn the true pearls of the techniques that are never written about.”

Master Series courses offer clinical education that combines state-of-the-art equipment, instrumentation and research, and experts in the neurosurgical field. This advanced programming for experienced neurosurgeons also features customized operating rooms, hands-on instruction, and high faculty-to-participant ratios.

It was the success of a sold-out endoscopic spinal course held at MERI last July that spurred the development of the Master Series. That course, “Innovations in Spinal Fixation: An Advanced Course,” now a part of the Master Series, will be held once again at MERI on July 26 and 27. Additional clinical course offerings are in the planning phases.

Like all AANS courses, the Master Series offers continuing medical education credits that can be applied toward the 60 neurosurgical neurosurgical credit hours required for maintaining AANS membership, as well as toward category 1 credits for the American Medical Association Physician’s Recognition Award.

Information on future Master Series courses and all AANS continuing medical education courses is available on the AANS Web site, www.AANS.org, and from the Education and Practice Management Department, (888) 566-AANS. ■

Vanessa Garlisch is education manager in the AANS Education and Practice Management Department.

Advocating Professional Development

CSNS Committees Lay Foundation for Change

Advocacy focusing on socioeconomic issues that impact neurosurgeons in their day-to-day practices is one of the main working goals of the Council of State Neurosurgical Societies (CSNS). The CSNS holds that it is equally important to educate neurosurgeons about these issues and to teach them how to advocate on behalf of neurosurgery in their own communities and beyond.

Education Committee Tackles PLI Crisis at Annual Meetings

To coordinate its crucial educational efforts, the CSNS established the Communications and Education Committee. Under the skillful and solid leadership of William Bingaman, MD, several successful programs have been established and are ongoing.

A superb half-day program on the professional liability insurance (PLI) crisis was held on Thursday during the September meeting in Philadelphia. The results of the CSNS PLI survey were presented in detail. A variety of perspectives, including those of the Association of Trial Lawyers of America and the American Tort Reform Association, were clearly presented in a lively format. Attendees rated the informative session highly, and a similar session is planned for the October meeting in Denver.

Unfortunately, the PLI crisis continues to plague neurosurgeons across the United States. In recognition of this fact, the CSNS will host a special course titled "The 2003 Malpractice Crisis: Current Perspectives" on Thursday, May 1, during the AANS Annual Meeting in San Diego. Under the leadership of Stanley Fronczak, MD, JD, chairman of the CSNS Medicolegal Committee, the course will provide an update on the status and scope of the

problem, along with perspectives from the insurance industry and defense attorneys. The very important topic of how to protect oneself financially will be detailed. With a question and answer discussion, this promises to be a very informative and timely course.

Workforce Committee Addresses PLI Fallout, More

The Workforce Committee will play a vital role in addressing workforce issues in this country. Mick Perez-Cruet, MD, and Debra Benzil, MD, have been appointed to co-chair this committee. With the current PLI crisis pressuring neurosurgeons to retire early, relocate or change their prac-

David F. Jimenez, MD, FACS, is chair of the Council of State Neurosurgical Societies. He can be contacted at jimenezd@health.missouri.edu with questions regarding the CSNS.



tice patterns, workforce issues have never been so important to our specialty. The committee is charged with surveying and presenting to us the scope and the depth of these problems.

Opportunities Abound for Young Neurosurgeons

The CSNS Young Neurosurgeons Committee provides a forum where residents and neurosurgeons early in their practices can become actively involved through the resolution process. Recently appointed co-chairs Richard D. Fessler, MD, and Cheryl Muzynski, MD, will be involved in several critical projects that affect both

residents in training and recently graduated neurosurgeons.

Effective leadership is extremely important for the future of our specialty. Therefore, the CSNS has made every attempt to nurture and prepare young neurosurgeons to become effective and knowledgeable leaders. To further this goal, a separate resident delegate category has been created, allowing neurosurgeons in training to become knowledgeable of complex socioeconomic topics and to participate fully in CSNS proceedings.

Grants Aid Attendance, Add to Knowledge Base

The resident delegates' attendance at the CSNS spring and fall meetings is supported through unrestricted educational grants from industry that fully fund their travel and lodging. Residents who are interested in participating in this extremely successful and popular program should ask their program directors to submit a letter of nomination along with a brief biographical sketch to their respective regional quadrant chairmen. These are: Northeast: Stephen T. Onesti, MD; Northwest: Fernando G. Diaz, MD; Southeast: R. Patrick Jacob, MD; and Southwest: Philip J. A. Willman, MD.

Another important program of interest to young neurosurgeons and hosted by the CSNS is an afternoon session at the Scientific Program at the Congress of Neurological Surgeons meeting in October. Abstracts dealing with socioeconomic issues will be presented, with prizes presented to the best papers in two categories. A young neurosurgeon and a neurosurgery resident each will be presented with an award certificate and a \$1,000 check. Submission of abstracts for this session is strongly encouraged. ■

A Time for NERVES

Practice Managers Steel Themselves for Bottom Line Defense

In a special report on the 2003 Medicare Fee Schedule, *Part B News* reported that another 6 percent decrease is expected in the reimbursement for neurosurgeons' services unless Congress acts to reverse itself.

Year after year neurosurgeons are faced with the problem of providing exceptional care for declining reimbursement. Over the past five years, across-the-board cuts have caused neurosurgeons to see as much as a 40 percent decline in income, while they are working as hard or harder than they ever have. Neurosurgeons are being paid less as they are simultaneously hit with higher costs for professional liability insurance, labor, and compliance with the ever-increasing bureaucracy. Changes related to becoming compliant with the Health Insurance Portability and Accountability Act alone have added significantly to the cost of practicing neurosurgery.

Given this economic and regulatory environment, the most tempting course of action is to board up the windows and head for greener pastures. However, these times demand exactly the opposite action. Now is the time to get creative, engage our entre-

preneurial spirits, and use the enormous neurosurgery talent pool to find ways not just to survive, but to thrive.

Playing on the Same Team

There is a need to align the goals of neurosurgeons with those of their administrators and managers. Many an administrator has faced the grim consequences of being the bearer of bad news. Neurosurgeons ask, Why can't you collect more of the money for the services I have provided? The simple answer is that there is no more to collect. Why do we need all these people to support my practice? Because to get paid, even the reduced amount, it takes far more effort. Verification, authorization, and pre-certification have led to an explosion of required manpower. The time for blaming messengers is over. The time to unite for a common cause is upon us.

To help us as administrators and managers of neurosurgery practices, the Council of State Neurosurgical Societies is funding an initiative to develop a professional society for the advancement of our profession. As the interim president of NERVES, I look forward to collaborating with you on its formation.

What is the mission of NERVES? First and foremost it will be a forum where we can share ideas that work for a neurosurgery practice, as well as a source of solutions to the problems we all face. Over the last 15 years as a practice administrator, my most valuable source of education has been the information shared by my peers. A creative way to deal with a staff problem; a new source of revenue that doesn't add to the expenses; a process that not only saves money, but also makes the task easier—all of these ideas and hundreds more have been the fruits of interaction with my peers.

Neurosurgery is a specialized field. The solutions that work in a pediatric office will not work in a neurosurgery office. Neurosurgery administrators and managers need the support of others traveling the same road.

NERVES also will serve as the repository for data about the business of neurosurgery, offering a place we can turn to for valid benchmarking data so that we can properly understand the practice we are charged with stewarding. Our physicians deserve to have the peace of mind that comes from knowing their practice is functioning as well as it can in difficult times. By gathering reliable, valid data, NERVES will give us all an indispensable management tool.

Achieving Full Participation, Success

NERVES offers an exciting opportunity for gathering the resources that we need to thrive as managers. Neurosurgery itself is an exciting specialty, replete with opportunities to advance the health and well being of many people. Our physicians trust that those opportunities will be maximized through our careful management of their resources. With full participation of neurosurgery's practice managers, NERVES will succeed.

If you are a physician reading this, I hope you will recognize the fantastic opportunity NERVES will provide to maximize your financial success and discuss this opportunity with your practice manager. For us to help you we need your support—financial support, time to attend meetings, and encouragement to be involved. Alone we can each accomplish a great deal, but together we are unstoppable. ■

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

For information about membership in NERVES

and the first meeting in San Diego on April 25 and 26, contact Barbara Hurlbert, membership chair, at Lyerly Neurosurgical Associates, 2151 Riverside Avenue, Jacksonville, Fla., 32204-4416, (904) 388-6516 or bhurlbert@lyerlyneuro.com.

More information also is available online at www.neurosurgery.org/csns.

Full Sail for San Diego

2003 AANS Annual Meeting, April 26–May 1

Against a backdrop of sea and sun, the neurosurgical conference of the year has taken shape. For the 71st Annual Meeting of the American Association of Neurological Surgeons (AANS), San Diego is the destination. “Cultural Connections: Bringing Global Perspective to Neurosurgery” promises a series of engaging events, from substantive scientific opportunities to scintillating social occasions, offering many possibilities for significant and satisfying collegial interaction.

The main events are preceded on April 25 by a scientific exchange between the AANS and the Japan Neurosurgical Society (JNS). The symposium and evening reception are open at no additional charge to all medical registrants of the AANS Annual Meeting.

The weekend that follows signals the approach of an extraordinary science extravaganza, with 42 practical clinics, among them three new courses: Hands-On Peripheral Nerve Injuries, Image-Guided Cranial and Intraoperative MRI, and Interactive Image-Guided Spinal Surgery.

On Sunday evening the meeting is officially launched with the Opening Reception, where “Ports of Call” offer cultural connections at the San Diego Convention Center’s spectacular Sails Pavilion. Dancing and desserts follow at the “Fun” draiser benefiting the Neurosurgery Research and Education Foundation (NREF).

Then it’s full speed ahead with four days of breakfast seminars, plenary sessions, and scientific sessions, punctuated by five special lectures, plus the Presidential Address by Roberto C. Heros, MD, on Monday and Cushing Oration by Henry A. Kissinger, PhD, on Tuesday. In addition, featured awardees include Stewart B. Dunsker, MD, Cushing Medal, and Troy M. Tippet, MD, Distinguished Service Award.

The AANS Resource Center—located in the Exhibit Hall where exhibitors feature the latest neurosurgical equipment and services—offers vital information, products and services that enhance the Annual Meeting experience. From April 28-30 the Resource Center also serves as the home of the Fifth Annual Silent Auction, sponsored by the Young Neurosurgeons’ Committee to benefit the NREF.

New in the mix this year are two interactive sessions that tap into audience response technology. On Wednesday at 9:45 a.m., Richard G. Fessler, MD, moderates a point-counterpoint discussion on the significance of posterior or anterior lumbar interbody fusion compared to traditional transverse process fusion with pedicle screws. On Thursday at 9:45 a.m., David F. Jimenez, MD, moderates a discussion on a timely topic, the professional liability insurance crisis.

The special events offered every evening are complemented by San Diego’s incredible array of activities and attractions—the San Diego Zoo, Coronado, trolley tours, Balboa Park, Legoland, the Wild Animal Park and much more—sure to please loved ones who are accompanying meeting attendees. ■

2003 ANNUAL MEETING PROGRAM AT A GLANCE

San Diego Marriott Hotel & Marina/San Diego Convention Center

FRIDAY, APRIL 25

Japanese-American Neurosurgical Friendship Symposium & Reception	8:00 AM-3:15 PM 6:00 PM-7:30 PM
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SATURDAY, APRIL 26

Practical Clinics	8:00 AM-5:00 PM
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SUNDAY, APRIL 27

Practical Clinics	8:00 AM-5:00 PM
Opening Reception	6:30 PM-8:30 PM
NREF “Fun” draiser	8:30 PM-11:00 PM

MONDAY, APRIL 28

Breakfast Seminars	7:30 PM-9:30 AM
Exhibits	9:00 AM-4:00 PM
Plenary Session I	9:45 AM-1:00 PM
The Richard C. Schneider Lecture	10:55 AM-11:25 AM
AANS Presidential Address	12:20 PM-1:00 PM
Lunch in Exhibit Hall/Poster Viewing	1:00 PM-2:45 PM
Scientific Sessions	2:45 PM-5:15 PM
AANS Annual Business Meeting	5:30 PM-6:30 PM

TUESDAY, APRIL 29

Breakfast Seminars	7:30 PM-9:30 AM
Exhibits	9:00 AM-4:00 PM
Plenary Session II	9:45 AM-1:00 PM
Hunt-Wilson Lecture	10:15 AM-10:50 AM
Cushing Oration	12:10 PM-1:00 PM
Lunch in Exhibit Hall/Poster Viewing	1:00 PM-2:45 PM
Section Sessions	2:45 PM-5:30 PM

WEDNESDAY, APRIL 30

Breakfast Seminars	7:30 AM-9:30 AM
Exhibits	9:00 AM-3:30 PM
Plenary Session III	9:45 AM-1:00 PM
Rhoton Family Lecture	10:50 AM-11:25 AM
1st Annual Theodore Kurze Lecture	12:25 AM-1:00 PM
Lunch in Exhibit Hall/Poster Viewing	1:00 PM-2:45 PM
Section Sessions	2:45 PM-5:30 PM

THURSDAY, MAY 1

Breakfast Seminars	7:30 AM-9:30 AM
Special Courses	9:45 AM-Noon
1st Annual Van Wageningen Lecture	9:45 AM-10:15 AM

For details, go to www.neurosurgery.org/aans/meetings/2003.

Custom Retirement Plan

AANS and Chernoff Diamond Offer Members STRAT-SD®

BY KATHLEEN T. CRAIG

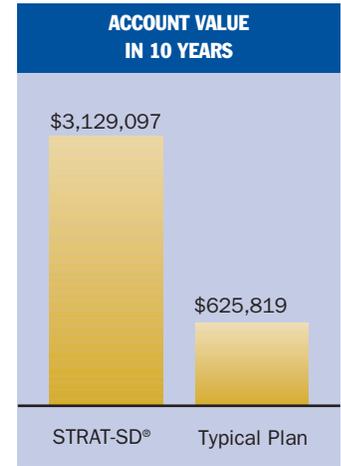
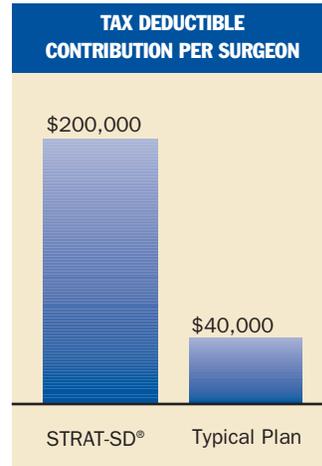
AANS members have been asking for high quality benefit planning services and retirement programs that they can implement for their practices and offer their employees. In response, the retirement programs and consulting services of Chernoff Diamond & Co. are now available to AANS members through an exclusive arrangement that permits access to Chernoff Diamond's comprehensive benefits advisory and administrative services at considerably reduced rates.

"In keeping with our ongoing commitment to provide value to members, we were searching for a benefits consulting firm that could offer a retirement plan that is custom-designed for AANS members' medical practices," noted William F. Chandler, MD, chair of the AANS Member Benefits Development Committee. "AANS selected Chernoff Diamond & Co. because it has been an acknowledged leader in the industry for 25 years and can offer members a unique, expanded plan designed specifically for medical professionals and their practices."

Chernoff Diamond developed STRAT-SD®, a flexible, IRS-approved retirement program that enables physicians to make substantial tax-deductible contributions. While traditional plans typically allow maximum contributions of \$40,000 per year, STRAT-SD permits designated physicians to make contributions totaling up to \$200,000 each year. At the same time, costs for eligible staff remain low, unless a practice chooses to provide greater benefits.

STRAT-SD was designed to accommodate the sometimes wide range of circumstances that prevail among different physicians, often within the same group practice. In this respect, a retirement plan can be designed to provide different contribution levels as well as to permit each participant to tailor investments to his or her personal and financial objectives, 24 hours a day and 7 days a week, on the Internet or over the phone. In addition, individual participant and full plan reporting, annual filings, and comprehensive administrative services are provided as an integral part of the program.

Chernoff Diamond consultants will be available at the AANS Annual Meeting in San Diego at Booth 2522. Private consultations with Chernoff Diamond professionals also will be offered by appointment and at no charge during the Annual Meeting. AANS members can contact Chernoff Diamond by telephone at (516) 683-6100 (ask for AANS Retirement Plan Services) or by e-mail at aans@chernoffdiamond.com for further information or to reserve time for a private consultation. Additional information is available by visiting www.chernoffdiamond.com/aans. ■



Kathleen T. Craig is AANS director of marketing.

Patient Privacy: What Happened to Ethics?

A Physician/Attorney Ponders the Essence of HIPAA

I was visiting my personal physician a few days ago. While sitting in his waiting room, I learned quite a bit of information about several of the doctor's patients by merely overhearing some telephone conversations in the front office.

One employee phoned in an antidepressant prescription for Mary Jones. Another was discussing with John Smith the specifics of his psoriasis treatment. Then, I overheard the doctor himself asking for Sally Brown, and then giving her the results of her pap smear. (She's going to need to be referred for some cryosurgery, and she now knows that the problem is possibly a result of an earlier sexually transmitted disease.) And now I, someone who may or may not know these patients myself, am privy to their ailments.

As a physician-turned-lawyer whose practice includes advising healthcare clients on patient privacy issues, I felt obligated to give my doctor, who happens to also be a friend, a bit of free legal advice. He admitted that that he and his office staff should be more careful about divulging patient confidences.



I explained to my friend that, in our computer- and Internet-driven world, the public is becoming ever more concerned about the privacy of personal information. The governor of California just signed into law a bill that will require all businesses and state agencies to inform state residents about any unauthorized access to the resident's computerized personal information. Those businesses include hospitals, medical groups, physician practices, and the like. Most states have also enacted statutes that specifically limit disclosures of individually identifiable patient information.

And of course, there is HIPAA, the Health Insurance Portability and Accountability Act, a federal statute that significantly impacts the way patient information may be handled and disclosed. Physicians will have to comply with HIPAA's requirements by next spring.

My friend acknowledged that he had a basic awareness of some of these laws. He expressed anger and disappointment that

such breaches could now actually get him into legal trouble, or possibly even criminal legal trouble. He wistfully reminisced about the "old days" when such indiscretions were merely ethical violations that might have resulted in a slap on the wrist from the county medical society, or at worst, from the state medical board.

Enforced Ethics

Ethics is the set of rules or standards governing the conduct of the members of a profession. At first glance, it appears that one of the most fundamental ethical principles in medicine—maintaining the privacy of the doctor-patient relationship, and protecting the information obtained as a result of that relationship—is becoming the law. For many years, the physicians and the members of all other professions enforced their ethics through licensing boards, peer review bodies, and professional societies. The legislators stayed out of the way. Is it an insult to the medical profession

ADDITIONAL RESOURCES

- **AANS HIPAA Web Resource Center**
www.neurosurgery.org/aans/membership/hipaa.html.
- **AANS HIPAA Privacy Manual**
Comprehensive guide to HIPAA compliance on CD-ROM is available from the AANS Online Marketplace at www.AANS.org or by calling (888) 566-AANS.
- **CMS Web Site for HIPAA**
Administrative Simplification
www.cms.hhs.gov/hipaa/hipaa2.

that the legislators are now interfering in medical ethics? Has the public, through its legislators, decided that physicians are unable to police themselves?

To conclude that the legislators are attempting to regulate medical ethics through consumer and patient privacy legislation would be a narrow view of the purpose of these laws. With healthcare comprising an ever-increasing percentage of our nation's gross national product, the public is justified in being concerned about more than whether individual physicians are violating patient confidences by inappropriately discussing Mrs. Jones' hysterectomy at a cocktail party.

These laws target healthcare as a multi-billion-dollar industry, and, whether we like it or not, physicians are now simply a small part of that industry. Though physicians are still appropriately the key players in medical staff governance, the business of healthcare is now shared with many non-physician business executives. The day-to-day business of healthcare necessarily requires that all sorts of people—from receptionists to phlebotomists to chief financial officers—have access to and control over patient medical information.

Further, our private healthcare data is now transmitted over the information superhighway to insurers, managed care organizations, independent practice organizations, medical record keeping services, and scores of other entities. The public's concerns over patient privacy today arise not so much because of the lack of professionalism of an individual physician (or his or her overworked office staff), but rather because of the huge extent to which the information has become accessible to countless numbers of people and because of the potential vulnerabilities of the information databases.

Restoring Trust

To better ensure that our private health information remains private, state and federal legislation is no doubt necessary. It only follows that physicians, as one small part of

IMPORTANT DATES FOR HIPAA IMPLEMENTATION

Aug. 21, 1996

The Health Information Portability and Accountability Act becomes law.

Dec. 28, 2000

Final rule "Standards for Privacy of Individually Identifiable Health Information" (Privacy Rule) is published in the Federal Register.

Dec. 27, 2001

The Administrative Simplification Compliance Act becomes law, providing a means by which the administrative simplification provisions of HIPAA may be extended by one year.

April 14, 2001

Effective date for the Privacy Rule.

March 27, 2002

Health and Human Services proposes changes to the Privacy Rule (www.hhs.gov/ocr/hipaa/propmods.txt).

March 29, 2002

CMS issues a model compliance plan for filing a one-year extension to comply with the rule governing electronic healthcare transactions (www.cms.hhs.gov/hipaa/hipaa2/ASCA_Form.asp).

July 6, 2002

The HHS Office for Civil Rights publishes "Guidance for the Privacy Rule" (www.hhs.gov/ocr/hipaa).

Aug. 14, 2002

Final Rule "Standards for Privacy of Individually Identifiable Health Information" (Privacy Rule) is published in the Federal Register.

Oct. 15, 2002

Date by which a compliance plan for an Electronic Health Transactions and Code Sets one-year extension needed to be postmarked or filed electronically.

Oct. 16, 2002

Original compliance date for Electronic Health Transactions and Code Sets.

Feb. 20, 2003

Final Rule for Electronic Health Transactions and Code Sets is published in the Federal Register.

April 14, 2003

Compliance date for the Privacy Rule.

Oct. 16, 2003

Compliance date for Electronic Health Transactions and Code Sets for those with a compliance plan filed by Oct. 15, 2002.

the healthcare system, must be included among those mandated to ensure patient privacy. Indeed, that legislation, though perhaps burdensome from an administrative perspective, ultimately allows physicians, medical groups, and the like to ensure that their patients are able to restore trust to this important profession with some of the most

private information there is, information concerning our health. ■

R. Gregory Cochran, MD, JD, is an associate in Foley & Lardner's San Francisco office.

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Patients Asked to Arbitrate, Not Litigate

Neurosurgeons Unite, Tackling Challenges to Their Livelihood

This article is not available on the AANS Web site. Please contact the AANS Communications Department at 847.378.0500.



The Right Resources Facilitate Coding

The AANS, Other Specialty Societies and the AMA Offer Reliable Information

Neurosurgery practices once again face a series of new codes, reimbursement rules, and practice regulations that must be implemented. Although attending the professional development courses sponsored by the American Association of Neurological Surgeons (AANS) remains a very effective means of conveying both the old and new rules of coding and reimbursement, attendees frequently ask for additional resources that might serve as a reference when questions arise during the year. Consequently, this edition of the Coding Corner will focus upon the publications and other resources available to assist in addressing coding and billing questions.

CPT 2003 Is Available

The American Medical Association (AMA), which owns the copyrights to Current Procedural Terminology (CPT), remains an invaluable source of both written and computer-based manuals to assist the physician in practice. It is imperative that the office has the newest version of CPT (the CPT 2003 book already is available). This is the definitive source for identifying appropriate codes to describe physician services and includes several categories of new codes applicable to neurosurgery, including endoscopic cranial codes, several trauma codes for craniectomy and lobectomy, as well as a code for placement of chemotherapeutic wafers into a tumor bed. However, it is also important to maintain copies of previous CPT editions. Certain third-party payers may base payment policy on previous versions of CPT, whereas others may take several months before recognizing new codes. The AMA has a Web site, www.ama-assn.org, which provides a wealth of publications that are essential to running an effective practice.

Another valuable text from the AMA is Medicare RBRVS: The Physician's Guide. This manual summarizes in user-friendly format the modifier rules applicable to individual codes as well as the relative value units ascribed to each code by the Centers for Medicare and Medicaid Services (CMS). When dealing with payers whose fee schedules follow the relative-value system of CMS, billing personnel should know the comparative values of code sets done in the same operative setting so that the primary stand-alone code used to describe the service is also the highest-valued code.

With changes to the practice expense formula over the past four years, certain codes have changed in their comparative values. Although the relative-value measures also can be obtained from the Federal Register in its early November publication (www.access.gpo.gov), the concerns of Thomas A. Scully, CMS administrator, about the anesthesia formula have postponed publication until recently. Moreover, the Federal Register is a more cumbersome document compared to the AMA publication.

CodeManager Offers Integrated Format

Alternatively, the CodeManager offered by the AMA on CD-ROM combines CPT 2003 Professional Edition, International Classification of Diseases, 9th Clinical Modification (ICD-9-CM 2003), Healthcare Common Procedure Coding System (HCPCS 2003), relative-value unit data, Medicare payment rules, and the National Correct Coding Initiative (CCI) rules in one integrated format. Moreover, the software references the CPT Assistant publications and will communicate with the CPT Assistant Archives software to help coders and billers understand the AMA interpretation of various coding rules and controversies.

Specialty societies also provide more

specific guidelines to coding. The AANS publishes A Guide to Coding Procedures for Neurosurgery, now in its second edition. Similarly, the North American Spine Society (NASS) publishes Common Coding Scenarios for Comprehensive Spine Care that shows a multitude of coding examples for both open and percutaneous procedures. The latter book also can be purchased through the AMA. Although there are a variety of newsletters that also offer coding and reimbursement advice, practices should be careful about the accuracy of recommendations given by vendors and others in the absence of appropriate review by experts involved in the CPT or Relative-value Update Committee (RUC) process.

Finally, specific coding questions can be referred through the AANS Coding Hotline, NASS, or directly through the AMA.

In summary, there are a variety of coding and reimbursement resources available to facilitate the efficiency and accuracy of the coding and billing process. I highly recommend participating in the AANS-sponsored courses held around the country eight times per year to efficiently obtain a foundation of knowledge about the rules and processes. This will facilitate the use and interpretation of the other resources to effectively manage a practice. ■

Gregory J. Przybylski, MD, is director of neurosurgery at the New Jersey Neuroscience Institute, JFK Medical Center, and professor of neurosurgery at Seton Hall University. He is a faculty member for AANS-sponsored coding and reimbursement courses.

ONLINE CODING RESOURCES

- **Reference Materials:**
www.neurosurgery.org/marketpl
- **AANS Coding Courses:**
www.neurosurgery.org/aans/meetings/epm/coding.html

Notice of Suspension

Professional Conduct Committee Recommendation Is Approved

On Nov. 23, the Board of Directors of the American Association of Neurological Surgeons (AANS) approved the recommendation of the Professional Conduct Committee that the AANS membership of Robert W. Rand, MD, be suspended for one year for his unprofessional conduct while testifying as a plaintiff's expert in a professional liability case.

Dr. Rand had neither practiced pediatric neurosurgery nor treated head-injured children since 1989, but he testified that the standard of care in 1997 required the early administration of corticosteroids (Decadron) in acute head injury cases and

that had such steroids been given, the patient (who died with a severe case of diffuse cerebral edema), most likely would have recovered from his head injury.

The Professional Conduct Committee found, and the Board of Directors concurred, that Dr. Rand's testimony regarding the use of high-dose corticosteroids in the treatment of traumatic brain injury (TBI) was completely contrary to the conclusions of the Brain Trauma Foundation's head injury guidelines task force, which thoroughly researched the pertinent literature and concluded that corticosteroids have been demonstrated to be

ineffective in the treatment of TBI. During the hearing Dr. Rand admitted that he had not read the guidelines, which had been approved by the AANS Guidelines and Outcomes Committee and the AANS Board of Directors, before he testified in the underlying suit.

Dr. Rand's testimony was flagrantly unprofessional and demonstrated his lack of subject matter knowledge as well as his failure to do the necessary research to correct his lack of knowledge before testifying. Dr. Rand's testimony violated the AANS Code of Ethics and the Expert Witness Guidelines. (See Neuro News, page 3.) ■

Software Shuns Hard Work

Vendors Claim HIPAA Billing Compliance Is Providers' Responsibility

There is a dirty little secret in the healthcare information technology community: Billing software may not help a practice meet HIPAA requirements for transactions and code sets. In fact, vendors appear to be pushing HIPAA compliance costs onto providers by making them go through clearinghouses and other middlemen, said David Kibbe, MD, director of health IT for the American Academy of Family Physicians in Leawood, Kan.

"People looking after their own business interests here may be trying to save a buck" by not investing heavily in HIPAA upgrades, Kibbe said.

"I think that's entirely accurate," said Jim Brady, president and CEO of Richmond, Va.-based Payerpath, which hosts Web portals linking payers and providers. Brady said that as an alternative, billing software vendors are searching for claims processors to partner with in order to help their customers meet the HIPAA transaction guidelines.

HIPAA.org Can Help

Providers needing vendor help do have someplace to turn, however. HIPAA.org is a directory of practice management software companies that was launched in October by 14 medical specialty societies and provider-run HIPAA compliance workgroups.

Vendors use the site to report on the HIPAA readiness of their products. The voluntary listings are not evaluated, rated or endorsed by the Web site sponsors, but the vendors can indicate if their products have received certification from an independent HIPAA testing firm.

Only 19 of the 57 companies listed at www.HIPAA.org/pmsdirectory as of Dec. 10 had products that did not require a clearinghouse for practices to send and receive

both the X12 835 and X12 837 code sets — remittance advice and claims, respectively. Of the 57, only 36 supported these two transactions even with a clearinghouse.

Let the Buyer Beware

"From what I have seen, all of the developers for the most part have bowed out of the transaction side of HIPAA and they have concentrated more on the logging (privacy) and security pieces," said Matt Petty, associate vice president of IT for Surgis, a vendor of billing and scheduling software for surgical centers in Nashville, Tenn.

One vendor listed in the directory gives a blunt assessment of the situation. The Web site of Charlottesville, Va.-based Health Data Services states: "Make no mistake; the responsibility for HIPAA compliance rests squarely on the shoulders of providers... The truth is the vendor has no legal responsibility to assure your practice is compliant and because HIPAA is so broad in scope, any software application—in and of itself—can't provide a solution."

"It's entirely caveat emptor," said Kibbe, a founder of HIPAA.org and the founder of Canopy Systems, Chapel Hill, N.C., a developer of case management software. "The key (HIPAA) bottleneck for the practice is the practice management billing system."

According to Kibbe, there is no such thing as HIPAA-compliant software. Technology vendors are not covered entities under HIPAA and do not have a legal obligation to meet the Oct. 16, 2003, HIPAA transaction deadline.

But healthcare providers and payers do. Kibbe advises physician leaders to use HIPAA.org as a starting place. "As you put together your plans, look up your vendor," Kibbe said. "If your vendor is not there, call your vendor," he said. "If they don't list in a month or so, I would get worried. I would

start looking for another vendor."

Donald Michaels, a Boston-based partner in the healthcare consulting practice of PricewaterhouseCoopers, advises even those practices using products touted as HIPAA-compliant to double-check. "A lot of vendors have claimed that their software is HIPAA-compliant, but a lot of times we are finding that these programs are being customized by the clients" to make them compliant, Michaels said.

Nonstandard Issue

The problem will be more pronounced for small physician practices than for large groups or hospitals that have their own IT departments. Payerpath's Brady said small practices "are going to have a tremendous amount of cost to bear to get ready."

Some vendors are providing tool kits to "map" or translate the nonstandard identifiers common in the claim forms of major payers into HIPAA code because the software may not be capturing all the information the HIPAA transaction rule requires. For example, the new rules call for electronic claims to be more specific than "self," "spouse," "child" or "other" in describing a patient's relationship to the insured.

"Unless the provider captures all the data in that relationship, the vendor cannot make that up," said Kupa Zubeldia, MD, president and CEO of Claredi, a Kaysville, Utah, company that certifies products for HIPAA transaction readiness.

"Providers need to understand what is required so they can capture the data," Zubeldia said. "The vendor could provide the best software in the world, but if the provider does not capture the necessary data, the provider will not be compliant." ■

Neil Versel is a reporter for *Modern Physician*.
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Recognizing and Remembering Mentors

Neurosurgeon's Gift Honors the "Greats" Who Changed the Course of His Life

Dean H. Echols, MD, and Homer D. Kirgis, MD, made a lasting impression on one neurosurgeon. For John Clifford, MD, they changed the course of his life and were responsible for his decision to pursue neurosurgery as a specialty. In recognition of their influence, Dr. Clifford recently gave \$10,000 to the Neurosurgery Research and Education Foundation (NREF) in honor of these two "greats" in the field of neurosurgery.

Dr. Echols: Master of Clinical Diagnosis

Dr. Echols came to New Orleans from Ann Arbor, Mich., before World War II. At the University of Michigan he was a contemporary of Edward Kahn, MD, and Dr. Echols and Dr. Kahn both trained under Max Minor Peet, MD.

While at Michigan in 1934, Dr. Echols and Dr. Peet were the first to report on the pathology and clinical features of ruptured cervical discs, as well as surgery to repair them. Dr. Echols published a paper reporting two cases of rupture of the intervertebral disc; this may have been one of the earliest papers calling this pathological condition to the attention of the physician community.

Soon after arriving in New Orleans, Dr. Echols joined Alton Ochsner, MD, and the other founders of the Ochsner Clinic, all of whom had faculty appointments at Tulane University School of Medicine. When Dr. Ochsner became chairman of the Tulane surgery program, Dr. Echols became professor of neurosurgery.

Dr. Echols' primary interest was general neurosurgery, but he was always thinking of new and innovative ideas. In the 1940s he recognized the futility of trying to open a cervical syrinx and have it remain open. To combat the problem, he used a twisted stainless wire attached to a lamina extend-

"[Dr. Clifford's] gift honors them in full measure, and at the same time supports research by neurosurgeons-in-the-making who will improve our profession through their work."

ing into the syrinx. Movements of the neck caused the wire to move, allowing the syrinx to communicate with the subarachnoid space. He also popularized the use of the tracheostomy in the management of comatose patients, particularly those with severe closed-head injury. Tracheostomy remained the standard of care until recent advances in pulmonary care, such as respirators, became available.

Known as a master of clinical diagnosis, Dr. Echols was rarely incorrect in the level he chose for surgery. He believed that at least one year should be allowed before making a decision to re-operate for "failed surgery" because most patients recovered within that time frame. He was one of the eight founders of the American Academy of Neurological Surgery, as well as its first president.

When Dr. Echols was starting his practice in New Orleans, Dr. Kirgis was a neuroanatomy instructor at Tulane University. Dr. Echols convinced Dr. Kirgis that pure anatomy was not as exciting as surgery, resulting in Dr. Kirgis becoming Dr. Echols' first resident in the Tulane neurosurgical residency program. Dr. Kirgis joined Dr. Echols in practice at the Ochsner Clinic, but he continued his neuroanatomical studies at Tulane.

Recalling the Duo's Distinctive Methods

A former resident of Dr. Echols', Horace Norrell, MD, remembered Dr. Echols and Dr. Kirgis as "two men who had entirely different personalities, but remained close and respected colleagues."

According to Dr. Norrell, Dr. Echols taught through the Socratic method, questioning as opposed to lecturing. A resident was expected to know the literature and possible surgical approaches to a problem. The operating room was his teaching laboratory, but a resident was silent until asked a question that frequently had no answer.

Dr. Kirgis, on the other hand, discussed his patients openly and occasionally would change his course of action based upon the suggestion of a resident. He was frequently in the laboratory when surgery started, and occasionally a resident would complete the surgery before Dr. Kirgis arrived.

A Gift in Repayment of a Debt

"I owe so much to Dr. Echols and Dr. Kirgis. They are responsible for my being where I am today," commented Dr. Clifford. As he nears retirement, Dr. Clifford finds himself in a position similar to his mentors, hoping to leave a legacy of experiences, information and skill with young neurosurgeons.

He believes that making a gift to NREF in his mentors' honor is a wonderful way to say thank-you to two extraordinary surgeons. Julian Hoff, MD, chair of NREF's Executive Council, agrees.

"Through his gift Dr. Clifford honors the memory of two neurosurgeons of the past who molded his life in neurosurgery," said Dr. Hoff. "His gift honors them in full measure, and at the same time supports research by neurosurgeons-in-the-making who will improve our profession through their work." ■

Michele S. Gregory, AANS development manager, can be reached at (847) 378-0540 or msg@aans.org.

Advancing the Specialty

Neurosurgery Research and Education Foundation Recognizes 2002 Donors

The Executive Council of the Neurosurgery Research and Education Foundation (NREF) of the AANS gratefully acknowledges the individuals, groups and corporations who generously supported the foundation Feb. 1, 2002 through Jan. 31, 2003. Included in this support are extraordinary philanthropic gifts made by Dr. and Mrs. John Guarnaschelli, Dr. and Mrs. Merwyn Bagan and Dr. Albert L. Rhoton and family.

We thank them for continuing to recognize the need for and understand the importance of providing critical funding for some of the most promising neurosurgical studies being conducted today. They have set the standard for the entire neuroscientific community through their efforts to enhance science.

Their investment in the future of the neurosciences reaps positive rewards—new advances in neurosurgery and vital lives being saved.

The AANS members, public and corporations supporting NREF include:

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Remembering Loved Ones

MICHELE S. GREGORY

When surgical procedures were not enough and the prognosis was bleak, a patient's family wanted to do something to honor the life and eventually the memory of a loved one. Frank Culicchia, MD, from West Jefferson Medical Center in suburban New Orleans, suggested making donations in memory of that loved one in support of research and education at the American Association of Neurological Surgeons (AANS).

The family wanted to know if their loved one's life could contribute in some way to the lives of others, and Dr. Culicchia said yes. He told them that through the support of research projects in the desired area (in their case it was glioblastoma multiforme), the family can find comfort in knowing that intense research is being funded and monitored by the Neurosurgery Research and Education Foundation (NREF) of the AANS.

"If we as neurosurgeons can talk to our patients' families about the option of organ donation, why not also approach them

about remembering their loved ones in another positive way," Dr. Culicchia observed. "As an alternative to routine remembrances, we can offer the family and friends information about making a gift in support of neurological research through NREF."

Most importantly, supporting NREF allows family members to pay tribute to their beloved, allowing them to move forward with hope instead of looking back at the pain.

The NREF annually awards one- and two-year fellowships and Young Clinician Investigator awards to the most promising young neurosurgeons in support of their research projects. Their studies are aimed at solving the neurosurgical crises of today, paving the way for life-changing advances in the neurosciences. The grant applications are reviewed and scrutinized by a committee of neurosurgeons who determine which projects merit funding.

More information about NREF and making a donation is located at www.neurosurgery.org/aans/research or by calling (847) 378-0540.

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AANS/CNS Sections Committees Associations Societies

AANS HIPAA Privacy Manual and Resource Center

AANS is offering a new manual, developed by Gates Moore & Company, designed to help neurosurgeons stay compliant with the Health Insurance Portability and Accountability Act. The AANS HIPAA Privacy Manual is one of the resources available from the HIPAA Resource Center at www.neurosurgery.org/aans/membership/hipaa.html. This site is updated frequently with additional resources that assist neurosurgeons and their staffs in understanding the particulars of HIPAA's administrative simplification provisions as they are defined.

Are Your Program's Doors Open to International Surgeons?

If so, your program and contact information can be included in the AANS International Outreach Committee's listing at www.neurosurgery.org/aans/meetings/visitingneurosurgeons.asp. All arrangements for a visit are made directly between the candidate and the host institution, which determines the length, structure and content of its programs. Currently listed are 16 U.S. programs that offer a variety of opportunities for visiting surgeons.

World Spine II, Aug. 10-13, 2003

An international spine conference, World Spine II: The Second Interdisciplinary Congress on Spine Care, is scheduled for Aug. 10-13 in Chicago, Ill. The meeting features interdisciplinary presentations given by international speakers, 10 didactic lectures and surgical technique workshops, special symposia, 240 oral paper presentations, more than 200 poster presentations, and an exhibition designed as a forum for industry to showcase the newest products and services available for the care of the spine. Underwritten by the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves and the North American Spine Society, World Spine II is presented in cooperation with the Council of Spine Societies. Further information is available at www.worldspine.org.

2003 NASS Research Fellowships: Deadline, May 2, 2003

The North American Spine Society (NASS) is offering funding for two research opportunities: The Clinical Traveling Fellowship, for which at least one month must be spent in three to five different med-

ical centers studying spine techniques; and the Research Traveling Fellowship, for which at least five months must be spent at one medical center (other than the one in which the applicant currently practices). Applications must be received in the NASS office by May 2. For an application, go to www.spine.org/Research/ResearchProgram.cfm.

AANS/CNS Section Programs at the AANS Annual Meeting in San Diego April 26-May 1, 2003

For more AANS Annual Meeting information, see page 24.

- Cerebrovascular Surgery Session: Wednesday, April 30, 2:45-5:30 p.m. www.neurosurgery.org/cv
- Disorders of the Spine and Peripheral Nerves Session: Tuesday, April 29, 2:45-5:30 p.m. www.neurosurgery.org/spine
- Neurotrauma and Critical Care Session: Wednesday, 2:45-5:30 p.m. www.neurosurgery.org/trauma
- Pain Session: Tuesday, April 29, 2:45-5:30 p.m. www.neurosurgery.org/pain
- Pediatric Neurological Surgery Session: Wednesday, April 30, 2:45-5:30 p.m. www.neurosurgery.org/pediatric
- Stereotactic & Functional Neurosurgery Session: Wednesday, April 30, 2:45-5:30 p.m. www.neurosurgery.org/stereo
- Tumors Session: Tuesday, April 29, 2:45-5:30 p.m. www.neurosurgery.org/tumor

Isabelle M. Germano, MD, contributed the following update on Tumor Section activities:

Over the past two years the AANS/CNS Section on Tumors has grown in stature and visibility thanks to the outstanding leadership of James T. Rutka, MD. At the AANS Annual Meeting in San Diego, the Tumor Section will offer two new scientific awards, the Bittner awards. A senior investigator and a junior investigator will be honored. The section continues to offer the Preuss Award, the American Brain Tumor Association Young Clinician Investigator Award, the National Brain Tumor Foundation Mahaley Award, and the Farber Award as part of our biannual awards distribution. Finally, a very exciting scientific program, organized by Ab Guha, MD, will serve as a forum for the presentation of topics on novel therapies for brain tumors, such as the use of modulators of angiogenesis, neural stem cells, and oncolytic viruses.

More Annual Meeting Highlights

- AANS Section on History of Neurological Surgery Session: Tuesday, April 29, 2:45-5:30 p.m. Stanley Finger, PhD, featured speaker. www.neurosurgery.org/history
- Women in Neurosurgery Reception and Panel Discussion: Tuesday, April 29, 5:30-7 p.m. www.neurosurgerywins.org
- Young Neurosurgeons Luncheon Session: Harold L. ReKate, MD, featured speaker; Wednesday, April 30, 1-2 p.m. www.neurosurgery.org/yms

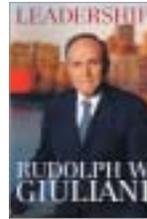
Have News Briefs for News.org? Send them to

Lessons in Leadership

Accountability and Communication Might Improve Healthcare, Too

Neurosurgeons are all leaders. As leaders, we can learn something from Rudolph Giuliani's experiences as mayor of New York. To assume that this book was produced as a result of Sept. 11 is not correct because much of it already had been written. Nevertheless, the mayor's experiences of September 2001 certainly make his advice more compelling and have sent this book to the top of the bestseller lists.

Giuliani's eight years as mayor of this country's largest city produced, without question, a dramatic transformation. In September 1990, *Time Magazine* featured a cover with a broken heart and the headline "The Rotting of the Big Apple." Ten years later, *Time*



Leadership by Rudolph W. Giuliani with Ken Kurson, Hyperion, New York, 2002, 407 pp.

described New York as the safest large city in America. This metamorphosis from a crime-ridden catastrophe to a tourist mecca with safe streets yields a lesson which we in healthcare cannot ignore.

Giuliani introduced accountability into city government. The centerpiece in his strategy to reduce crime was called COMPSTAT. It is a system for the daily documentation of crime statistics and performance indicators. Obviously, one of the key factors was to collect appropriate data. COMPSTAT was

successful because it was flexible and because it was timely.

Once accountability was modeled in the police department, the model was applied throughout the city's agencies and departments. It was called the Citywide Accountability Program, and each agency created its own program which had to meet the following four criteria: regular collection of data (usually daily); 20-40 performance indicators; regular review meetings (at least weekly); and publication of representative performance indicators on the city's Web site.

The mayor's strong belief in frequency of meetings is best exemplified by a daily 8 a.m. meeting of all department heads. The meetings were brief, well-orchestrated and mandatory. It not only kept everyone on the same page, but fostered communication between departments. Giuliani set an incredibly high standard for working long hours and was able to surround himself with wonderfully committed people.

The author does not mince words in his advice about leadership. He includes chapters entitled "Bribe Only Those Who Will Stay

Bribed" and "Stand up to Bullies." He has subtitled sections "Do What's Possible, Try What's Not," "Don't Exceed the Pig Factor," and "Be Ready to Pull the Trigger When Time Is Short."

Everyone who reads this book is anxious to learn about the events of Sept. 11. Although the author's account is dramatic, he appropriately points out that his administration had for seven years laid the groundwork that enabled his administration to manage the catastrophe.

No one who lived through the events of Sept. 11 will ever be the same. Mayor Giuliani is of the impression that his whole life, and particularly the previous seven years as mayor, prepared him for that day. He became a better mayor and a better person on that day. As a result, we all have something to learn from him. Read this book. ■

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



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Calendar of Neurosurgical Events

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 socioeconomic/dstaff.html

2003 Annual Meeting of the American Association of Neurological Surgeons
 April 26-May 1, 2003
 San Diego, Calif.
 (847) 378-0500
 www.neurosurgery.org/aans/
 meetings/2003

International Society for the Study of the Lumbar Spine Annual Meeting
 May 13-17, 2003
 Vancouver, British Columbia,
 Canada
 www.issls.org

American Board of Neurological Surgery
 May 14-17, 2003
 Cincinnati, Ohio
 (713) 790-6015
 www.abns.org

VIII Congress of Neurosurgery
 May 14-18, 2003
 Alicante, Spain
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Society of Neurological Surgeons Annual Meeting
 May 18-20, 2003
 Cincinnati, Ohio
 www.societyns.org

Quadrennial Meeting of the American Society for Stereotactic and Functional Neurosurgery
 May 18-21, 2003
 New York, N.Y.
 www.assfn.org

15th International Congress on Parkinson's Disease
 May 30-June 3, 2003
 Beijing, China
 xvicpd@chinamed.com.cn
 www.chinamed.com.cn/narti-
 cle2.php?id=74

Endocrine Society Annual Meeting
 June 4-7, 2003
 Philadelphia, Pa.
 www.endo-society.org

Neurosurgical Society of America Annual Meeting
 June 6-12, 2003
 Sunriver, Ore.
 www.neurosurgicalsociety.com

American Medical Association Annual Meeting
 June 15-19, 2003
 Chicago, Ill.
 (312) 464-4595

Canadian Congress of Neurological Sciences 2003
 June 17-21, 2003
 Quebec City, Quebec, Canada
 brains@ccns.org
 www.ccns.org

Rocky Mountain Neurosurgical Society 38th Annual Meeting
 June 21-25, 2003
 mcvicker@rmna.net
 www.rmns.org

6th Congress of the International Stereotactic Radiosurgery Society
 June 22-26, 2003
 Kyoto, Japan
 isrs@doc-japan.com
 www.doc-japan.com/isrs

Computer Assisted Radiology and Surgery (CARS 2003)
 June 25-28, 2003
 London, England
 fschweikert@cars-int.de

For a frequently updated, comprehensive listing, go to
www.neurosurgery.org/aans/calendar

[www.wfns.org/principal_](http://www.wfns.org/principal_conferences.html)
[conferences.html](http://www.wfns.org/principal_conferences.html)

Brain '03 and BrainPET '03: XXI International Symposium

June 29-July 3, 2003
 Calgary, Alberta, Canada
 brain03@brain03.org
 www.brain03.confmanager.com/mai-
 n.cfm?cid=47

8th International Conference on Cerebral Vasospasm

July 9-12, 2003
 Chicago, Ill.
 lmacdona@surgery.bsd.uchicago.edu
 www.cerebralvasospasm8.com

Cleveland Clinic International Summit for Finding the Cure for Glioblastoma

July 12-13, 2003
 Cleveland, Ohio
 (800) 223-2273 ext. 53449
 tobinm@ccf.org

Fourth Int'l Conference on Vestibular Schwannoma and Other CPA Lesions

July 13-17, 2003
 Manchester, England
 b.ashworth@easynet.co.uk
 www.vs2003.com

Upcoming AANS Courses

For information or to register call (888) 566-AANS or visit
www.neurosurgery.org/aans/meetings/epm/epmcourses.html.

• Beyond Residency: The Real World

Oct. 4, 2003 Los Angeles, Calif. (UCLA)

• Managing Coding & Reimbursement Challenges in Neurosurgery

May 16-17, 2003 Chicago, Ill.
 Aug. 22-23, 2003 Charlotte, N.C.
 Oct. 31 - Nov. 2, 2003 Maui, Hawaii
 Nov. 21-22, 2003 Baltimore, Md.

• Advanced Coding Course

Sept. 26-27, 2003 San Francisco, Calif.

• Neurosurgery Review by Case Management: Oral Board Preparation

May 11-13, 2003 Cincinnati, Ohio
 Nov. 9-11, 2003 Houston, Texas

• Neurosurgical Practice Management

May 18, 2003 Chicago, Ill.
 Sept. 28, 2003 San Francisco, Calif.

• Innovations in Spinal Fixation

July 26-27, 2003 Memphis, Tenn. (MERI)