AANS Bulletin
A quarterly publication of
The American Association of Neurological Surgeons

A. John Popp, MD, *Editor*
James R. Bean, MD, *Associate Editor*
Barbara Peck, *Staff Editor*
Tony Loster, CGCM, *Production Manager*
Jennifer Washlow, *Graphic Designer*

AANS National Office
22 South Washington Street
Park Ridge, Illinois 60068-4287
Telephone: (847) 692-9500
Telefax: (847) 692-2589
E-mail: info@aans.org
Web site: http://www.neurosurgery.org

Robert E. Draba, PhD, *Executive Director*
Laurie L. Behncke, CMP, *Dir. of Meetings*
Robert T. Cowan, CPA, *Controller*
Susan A. Nowicki, APR, *Dir. of Communications*
David W. Reid, *Dir. of Information Systems*
Tony Loster, CGCM, *Dir. of Print Production and Fulfillment Services*

Send change of address to:
AANS
22 South Washington Street
Park Ridge, Illinois 60068-4287

The *AANS Bulletin* is published quarterly by The American Association of Neurological Surgeons, 22 South Washington Street, Park Ridge, Illinois 60068-4287, (847) 692-9500, and is distributed without charge to the neurosurgical community. Unless specifically stated otherwise, the opinions expressed and statements made in this publication reflect the authors' personal observations and do not imply endorsement by nor official policy of The American Association of Neurological Surgeons.

AANS Bulletin

Volume 7 • Number 3
Summer 1998

Articles

9 Outcome Studies: An Overview

10 Cover Story—*Journal of Neurosurgery* Prepares for Next Century; Plans New Spine Edition

14 AANS Meeting A Success

16 Christopher Reeve Advocates for Neuroscience Research Dollars

27 Kentucky Neurosurgeon Elected President of the AANS

Departments

2 President's Message—Neurosurgeons Must Work Together to Fight Encroachment

3 Washington Update—AANS and CNS Reshape National Healthcare Reform Debate by Advocating for Basic Patient Protections

5 Governance

13 Managed Care Update—Managed Care Plans Dominated in 1997, But What of the Future?

23 Section News

24 Secretary's Report

25 N://OC®—Online Abstract Center Opens for Upcoming AANS and Section Meetings

26 Continuing Medical Education Opportunities

29 Positions

33 Research Foundation—Foundation Researchers Provide Project Updates

35 Membership—New Members Approved

36 Calendar of Events

President's message

Neurosurgeons Must Work Together to Fight Encroachment

Russell L. Travis, MD

I have been a neurosurgeon in private practice for over 25 years, and when I became President of the AANS a little over two months ago, I was well aware that this is a crucial time for the field of neurosurgery. Changes in reimbursement and technology have led to a challenge in traditional referral patterns and treatment protocols for neurosurgical disorders. The referral patterns and case loads we establish now will affect the field of neurosurgery for years to come. We must decide if we want to be "complete" neurosurgeons practicing all breadths of the profession, or just operating on malignant brain tumors and competing for the occasional disc. The current chaos in the medical system will eventually settle and if we as neurosurgeons don't take action to try and establish where neurosurgery will sit, someone will decide for us.

One of the areas being challenged most right now is the cerebrovascular field. I am not willing to give up the entire cerebrovascular field to neurologists, interventional radiologists, vascular surgeons and cardiologists. Stroke is a neurosurgical problem and we are the central nervous system specialists. Neurosurgeons clearly have the greatest understanding of the brain and these disorders and need to stay involved in the care of these patients. Treatment is not about a particular technical skill. There is a place for these talents, but the overall care of the patient must be managed by the person with the most comprehensive understanding of the disease process, the complications and the outcomes—the neurosurgeon.

Many neurosurgeons may not consider themselves exclusive "cerebrovascular specialists," but we need to ask "can you survive without doing any cerebrovascular cases, and will the next generation of neurosurgeons be able to?" I know my practice would take some hard hits if we eliminated all the cerebrovascular work.

The AANS and CNS have joined forces to create cerebrovascular fellowships and action recommendations through the Neuroendovascular Task Force; carotid endarterectomy and aneurysm outcomes programs through the Outcomes Committee; and marketing tools for stroke through the SMART Committee. As national organizations, the AANS and CNS can create policy statements, lobby appropriate groups, and develop marketing tools, but task forces, programs and committees aren't going to win this battle, only provide resources for our members to work with. This battle is going to be won in the emergency rooms, operating rooms and hospital board rooms across the country.

It is essential that every neurosurgeon be aware of these issues and get involved at the local level. If there is a medical center stroke team, you need to be on it. If protocols for cerebrovascular patients are being written, you need to be an author. When referring physicians and the community think of cerebrovascular disease, their initial response should be "neurosurgeon."

This is not going to be easy and it is going to take a commitment of time—something most neurosurgeons do not have in excess. But it is a battle worth winning, and to win we must all work together for the profession. If it is a matter of learning new techniques, then neurosurgeons need to educate themselves, if it's matter of cost, then we need to evaluate our spending patterns and create new, efficient treatment processes.

Currently, there are two projects that need the support of our members, and I ask that each of you at least consider implementing these programs into your practices. The Cerebrovascular SMART program will be released early next year and will include teaching slides, brochures and guidelines to help you raise awareness of neurosurgical cerebrovascular care in your own hometown. The research, the graphics and the quality of the materials promise to be top of the line, but it is the individual neurosurgery "ambassadors" who must go out and lecture to primary care physicians, emergency medicine workers and community members with a potential high-risk for stroke. As part of the program, the AANS and CNS will be sponsoring cerebrovascular exhibits at the Annual Meetings of The American Academy of Family Physicians, The American College of Physicians and The American College of Emergency Medicine and we will attempt to spread the word to thousands of doctors at once, but we are relying on you to finish the job once these doctors return home.

The Outcomes Committee has also developed several tools for evaluating patient outcomes and treatment that are easy to use and available on **NEUROSURGERY://ON-CALL®.** We have the opportunity to create a large database of cerebrovascular patient information, but we need data from individual neurosurgeons to make this project work.

The fact that neurosurgeons are comprehensive cerebrovascular care providers may seem obvious to us, but we need to make this known to primary care physicians, managed care organizations, emergency medicine physicians, neurologists and the patients themselves. We must be willing to take referrals and consultations, volunteer for hospital committees, bring our costs down to comparable levels, stay on the forefront of cerebrovascular research and new technology and most importantly, stand up and make ourselves know as they cerebrovascular experts.

Most of all this is going to require the time and effort of each of us the local level. If you want to be a cerebrovascular neurosurgeon, or treat aneurysms and perform carotids, it begins with stroke. In my experience, a neurosurgical practice starts from the ground up. We need to emphasize that stroke is a brain attack, a neurosurgical emergency and most importantly, be there to care for these patients when internists, family physicians, and emergency physicians call for help no matter the time of day.

This is not the only battle like this we will face over the next few years. There is still work to be done in spine, skull base, pain and mild head injury. We are working to address these areas as well. Medicine has become a competitive market place and as other medical specialties lose niches and patients, they will continue to look at neurosurgery for new areas upon which to encroach unless we become active and stand our ground.

Russell L. Travis M.D.

Russell L. Travis, MD
AANS President

Washington update

AANS and CNS Reshape National Healthcare Reform Debate By Advocating for Basic Patient Protections

by Lori Shoaf
Senior Washington Office Associate

Access to Specialists A Key in Proposed Act

The American Association of Neurological Surgeons and Congress of Neurological Surgeons have been active in the battle on Capitol Hill to provide patients with basic protections in their health plans. As a member of the Patient Access to Specialty Care Coalition (PASCC), the AANS and CNS have helped to redefine the current national debate. The PASCC brings together more than 130 national organizations representing consumers and providers of medical services. These groups are advocating that any managed care reform bill must include six principles as minimum standards for managed care. The GAP (Guaranteed Access for Patients) bill, officially known as the Patient Choice and Access to Quality Health Care Act of 1998 (H.R. 3547), includes the six principles in one package. The principles are:

- Healthcare plans must allow providers to give patients full information regarding their conditions and treatment options, i.e., no "gag" clauses.
- All health plans must allow patients access to specialists.
- Patients must have the right to an expedited appeal when a plan denies benefits for a coverage or service.
- A complete list of benefits and costs must be provided to patients prior to their signing up for a plan.
- All health plans must allow patients to seek treatment outside their HMO, with the HMO covering part of the cost.
- Health plans are prohibited from paying doctors more money for offering less treatment or refusing referrals.

Managed Care Poll

Earlier this year, the PASCC commissioned Frank Luntz, a GOP pollster, to conduct a national poll on managed care. The poll tested the principles outlined in the GAP bill and found that they were overwhelmingly popular with the American people. Frank Luntz indicated that in all his years of polling, he had not seen anything with the universal numbers that managed care reform has. It cuts across party lines, across age lines, across income lines. The random sample of more than 1000 people confirmed that Americans expect quality from their healthcare plan, and they are willing to pay a reasonable amount more to ensure access to the specialists, procedures, and information they need to make sound judgements about their health. *(See Figure 1 for summary of poll results)*

The AANS and CNS strongly support H.R. 3547 and urge you to contact your representatives in Washington to support this and similar initiatives. You may contact your representative by using the PASCC toll free hotline (1-800-756-1100) to generate a faxed letter to your members of Congress. You may also send an electronic message to your member from the PASCC web site at http://www.patientaccess.com.

There is not much time remaining in this year's congressional session, so it is imperative that neurosurgeons and their patients tell Congress that basic managed care reforms must be enacted this year.

For more information, please call Katie Orrico or Lori Shoaf in the Washington Office, (202) 628-2072.

Figure 1

H.R. 3547—"GAP" BILL PRINCIPLES TESTED IN NATIONAL POLL

Principle	% Support
Health care plans must allow providers to give patients full information regarding their conditions and treatment options.	96.6%
All health plans must allow patients access to specialists.	95.5%
Patients must have the right to an expedited appeal when a plan denies benefits for a coverage or service.	94.7%
A complete list of benefits and costs must be provided to patients prior to their signing up for a plan.	91.3%
All health plans must allow patients to seek treatment outside their HMO, with the HMO covering part of the cost.	87.2%
Health plans are prohibited from paying doctors more money for offering less treatment or refusing referrals.	67.6%

Washington *update* **(continued from page 3)**

Practice Expense Changes in the Medicare Fee Schedule; Neurosurgical Practice Expense Data Needed

by Robert E. Florin, MD

On June 1st, the Health Care Financing Administration (HCFA) released data on the proposed plan to reduce payment for practice expenses beginning in 1999. Initial analysis has revealed significant decreases in payment for many services, although the details are still unclear. HCFA indicated that the annual impact for neurosurgery over the next four years would be about 3 percent per year, with a total negative impact of about 10 percent. Other opinion suggests that it might be greater despite a staged implementation over the 4-year period.

The Washington Committee has been collecting actual data on neurosurgical practice expenses since last fall to use in judging what changes HCFA has proposed. We have had a major problem because of insufficient numbers of practices responding to the survey. We need a large number of practices to help with this effort because there is so much variation in practice expenses that a reasonable average will not be achieved without a broad sample. This must include the various demographic strata in our specialty, including academic settings, in order to achieve statistical significance. Without your help and participation, we will not be able to complete this project.

Some members have indicated a high level of interest in receiving an analysis of their own practice expenses, especially as compared to benchmark values for various categories of expense in other similar practices. This can be provided as long as we are able to collect sufficient numbers of responses to develop the benchmark databases, and have adequate funding to manage the survey process and the data collection and analysis.

Despite the politics of this move by HCFA to create a set of practice expense relative values based on resources consumed, this is still a data driven game. We have seen that specialties with even small amounts of credible data can prevail in this arena. The responses from the practice expense survey to date have shown that this can be done to useful effect, but the base of data needs to be much broader. This depends on the practicing neurosurgeons and their staffs to provide the information. If you receive a request for this data from your practice **please** cooperate and help, since this is only the end of the second round. The process of "refinement" of the HCFA data will continue over the next several years until fully implemented in 2002. Good data that contradicts HCFA's data will still be useful in improving the accuracy and fairness of our payment system, especially since over 80 percent of non-Medicare payers are using the Medicare Fee Schedule as a basis for their reimbursement policies.

NIH NAMES NEW NINDS DIRECTOR

Harold Varmus, MD, Director of the National Institutes of Health (NIH), announced the appointment of Gerald D. Fischbach, MD, as Director of the National Institute of Neurological Disorders and Stroke (NINDS), the leading federal agency supporting research on the brain and nervous system. Dr. Fischbach is the Nathan Marsh Pusey Professor of Neurobiology at the Harvard University Medical School. He is Chairman of the Departments of Neurobiology at Harvard Medical School and the Massachusetts General Hospital. He was also the founding Director of the Harvard University Initiative on Mind, Brain, and Behavior.

As the new Director of the NINDS, Dr. Fischbach will oversee a staff of more than 700 scientists, physician-scientists, and administrators, and an annual budget close to $800 million. The Institute supports research by investigators in public and private institutions across the country, as well as by scientists working in 23 intramural laboratories and branches at the NINDS.

"This is a remarkable time in the field of neuroscience. Exciting discoveries at all levels of analysis from molecules to mind have led to a more profound understanding of the normal and diseased brain," Dr. Fischback said. "It is an honor to be asked to serve as Director of NINDS at this time, and it is a welcome obligation to help the NIH remain the world's most important force promoting biomedical research."

Dr. Fischbach is an internationally renowned neuroscientist who throughout his career has studied the formation and the maintenance of connections between nerve cells and their targets. He developed methods for growing nerve and muscle cells outside of the body, and he has used such tissue cultures to study small molecules and proteins that alter synaptic efficacy.

Among his many awards and honors, Dr. Fischbach is a member of the National Academy of Sciences, the Institute of Medicine, and the American Academy of Arts and Sciences. He has served on numerous editorial and advisory boards including the Howard Hughes Medical Institute, the Helen Hay Whitney Foundation and the McKnight Foundation. He is a past-president of the 28,000-member Society for Neuroscience and he has been a trustee of the Marine Biological Laboratory in Woods Hole, Massachusetts. He is currently a non-Resident Fellow of the Salk Institute.

Dr. Fischbach received his undergraduate degree in Mathematics and Chemistry from Colgate University in 1960 and his M.D. from Cornell University Medical School in 1965. After interning in medicine at the University of Washington, he worked at the National Institutes of Health for eight years, first as a senior surgeon with the NINDS, and later as a staff fellow at the (then) National Institute of Child Health. Between 1973 and 1981, he served as an Associate Professor and later as a full Professor of Pharmacology at Harvard Medical School. In 1981, he accepted the position as Chairman of the Department of Anatomy and Neurobiology at Washington University School of Medicine. Before leaving St. Louis to return to Boston and his current positions, Dr. Fischbach became Director of Washington University's' Jacob Javits Center for Excellence in Neuroscience, and the John S. McDonnell Center for Cellular and Molecular Neurobiology.

Dr. Fischbach will join the NINDS staff on July 30, 1998.

Governance spring '98

Recent Actions of the Board of Directors

The AANS Board of Directors met during the 1998 Annual Meeting in Philadelphia. The highlights of their actions are presented here.

CPT Task Force

Richard Roski, MD, newly appointed co-chairman of the AANS/CNS Joint Officers Task Force on CPT Coding reported on the task force structure and planned activities. In addition to Dr. Roski, task force members include Richard Fessler, MD, co-chairman, Lyal Leibrock, MD, CSNS representative, Patrick Jacob, MD, CNS representative, and ex-officio members James Hallowell, MD, Greg Przybylski, MD, and Samuel Hassenbusch, MD. The group will report to the Joint Officers and will also interface with Washington Committee; they also anticipate working closely with the AANS Reimbursement Committee.

The task force recommended establishing a sub-committee on CPT education that would focus on how to improve the education of residents about issues of CPT and RBRVU's. It will also provide content input of the AANS PDP reimbursement courses. The subcommittee would also interface with **NEUROSURGERY://ON-CALL**® and help to develop methods to provide information on CPT coding issues to members through the web site.

The task force will also create a subcommittee to monitor coding changes and identify coding problems that physicians are experiencing to help improve the wording and interpretation of CPT codes, anticipate new technology that is being developed in neurosurgery, and try to be more pro-active in working to update and change the CPT coding system.

Finally, a subcommittee will be established to work at implementing the E/M documentation guidelines into neurosurgical practices.

CSNS

James Bean, MD, Council of State Neurosurgical Societies (CSNS) Liaison to the Board presented a number of CSNS resolutions for review and approval. The following four resolutions were approved:

- Request that the AANS and CNS oppose the exclusive adoption of the concept and/or practice of global (capitation) fees by malpractice insurance carriers for remuneration of attorneys, by actively advising their members that contracts between professional liability insurers and neurosurgeons should explicitly state the following: (1) method of reimbursement of defense attorney; (2) method of selection of defense attorney; (3) procedure for disposition of claim with or without consent of defendant neurosurgeons.
- Recommendation that the AANS and CNS support legislation to expand availability of Medical Savings Accounts (MSAs) to all Americans and to reduce the statutory requirements that make them uninviting to employers, insurers and lending institutions by promoting the following: (1) encourage the selection of MSAs by Americans by simplifying the enrollment process; (2) encourage insurers to establish catastrophic insurance policies linked to MSAs that are financially competitive with catastrophic insurance policies unassociated with MSAs; (3) encourage insurers to offer point-of-service options for patients who opt catastrophic policies linked to MSAs; and, (4) encourage employers to offer MSA policies among their menus of insurance options.
- Recommendation that AANS and CNS work with the AMA to change the E/M Documentation Guidelines to conform to the practice of neurosurgery.
- Recommendation that the "Guidelines for the Management of Severe Head Injury" be referred to the AANS/CNS Section on Neurotrauma and Critical Care for review, focusing on the disclaimer section in upcoming revisions of the document to further clarify its limitations and instructions for use, and to help inform providers regarding possible misinterpretations.

AMAP

The AMA has established a task force to address medical specialty concerns surrounding its new American Medical Accreditation Program (AMAP). AMAP is a voluntary accreditation program developed to measure and evaluate individual physicians against national standards, criteria and peer performance in five areas: (1) credentials, (2) personal qualifications, (3) environment of care, (4) clinical performance, and (5) patient care results. AMA's goal in developing the program is to improve public health through enhanced performance of individual physicians. Stephen Haines, MD, a past-president of the Congress of Neurological Surgeons (CNS), was chosen to represent neurosurgery on the AMAP Task Force.

Research Foundation

Outgoing President Edward R. Laws, Jr., MD, stated that Robert Ojemann, MD, current Chairman of the AANS Research Foundation, has announced his desire to step down from that post. The Board expressed its thanks for Dr. Ojemann's many years of service to the Foundation. Upon the recommendation of the Research Foundation Executive Committee, the Board approved the appointed of Julian T. Hoff, MD, a past president of the AANS and Chairman of the Department of Neurosurgery at University of Michigan Medical Center in Ann Arbor, Michigan, to serve as the new Foundation Chairman.

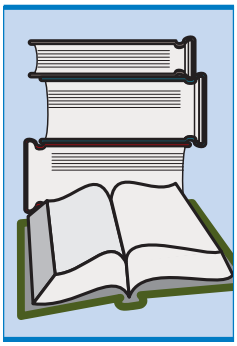
Membership

Fourteen applications for Active membership were approved, as were 22 applications for Active (Provisional) membership and six applications for Associate membership. Eleven requests for membership class transfers from Active (Provisional) to Active membership were also approved. In addition, one transfer from Lifetime to Active membership and 34 requests to transfer from Active to Lifetime membership were approved. Two nurse resignations from Associate membership were accepted and 18 applications for International Associate membership were approved. Finally, a request to transfer one member from International Associate class to Lifetime (Inactive) membership was approved.

Bulletin

It was announced that Michael L.J. Apuzzo, the first and only Editor of the *AANS Bulletin,* has stepped down from his post. John Popp, MD, was appointed to serve as the new Editor and James R. Bean,

continued on page 23



Outcome Studies: An Overview

by Megan Morgan
Project Manager, AANS/CNS Outcomes Initiative

The explosion of interest in the broad area of outcome studies has brought with it a significant amount of confusion both as to the foundational concepts behind outcomes and the terminology used. The following discussion is brought forward to provide some clarity and definitions.

Historical Perspective

Before defining where we are in terms of outcomes, it is helpful to see where we have been. The measurement of outcomes is not a new concept in medicine. Physicians have always noted the outcomes of care and treatment, albeit informally. The patient died or lived, got better or worse.

There are also many examples of efforts to develop a more organized approach toward collecting outcomes. Nearly 100 years ago, at the beginning of the 20th century, Dr. E. A. Codman, a Boston surgeon, brought forward the then new concept of recording the results of surgical treatment. His goal of using data to compare surgeons and hospitals was not warmly greeted by his colleagues. Likewise, Florence Nightingale's efforts to create methods to measure the effectiveness of care provided by hospitals also met resistance.

The current outcomes movement is being somewhat more readily accepted. Several compelling factors have led to the current emphasis on the importance of measuring the outcomes of treatment.

Small area Variations

In the 1970's, John Wennberg, MD, and his colleagues developed and refined small area analysis of variations in healthcare utilization. This methodology calculated population based rates of medical care utilization by patients, hospitals and health care providers. By defining hospital service areas through the use of zip codes, Wennberg developed per capita utilization rates for medical and surgical procedures.

Prior to Wennberg's research, the consensus among health care providers was that, once adjustments were made for age, gender and co-morbidities, utilization rates across geographic regions would be consistent. What the result of Wennberg's work disclosed, however, was the opposite. In almost all of the medical and surgical care studied, significant variations in utilization rates for elective procedures emerged. After factoring out other variables, it was determined that this variation arose because of differences in belief among physicians relative to the optimal way to treat certain conditions. For example, the highest rate for hysterectomies was 4 times greater than the lowest rate. Prostatectomy also showed a 4 times difference between the high and the low; and tonsillectomies showed a 6 time difference in rates.

The *Dartmouth Atlas of Health Care,* recently published in 1996, for which Dr. Wennberg was the Chief Investigator, shows little improvement in the rate of variation for common procedures. This has significant ramifications from both a quality of care as well as a cost perspective. The inherent uncertainty about which rate is the correct rate has been a major driver of the outcomes movement.

RAND Studies

The RAND study on the appropriateness of care also commenced in the 1970's. These studies focused on the appropriateness of surgical interventions for selected high volume procedures. Despite criticisms regarding the methodology used, the results are still noteworthy. Using a method developed by RAND researches, all possible criteria for performing certain procedures was developed. Retrospective chart reviews using the established criteria showed that 14 to 38 percent of targeted procedures were inappropriate. These findings added to the growing concerns relative to "which rate is the correct rate."

Outcomes Management

In 1996, Paul Ellwood, MD, delivered the Shattuck lecture during which he described our health care system as one *"driven by misguided choices, filled with instability and in need of a 'central nervous system' which could address and cope with complexities of modern medicine."* Dr. Ellwood defined the problem as arising from the "inability to measure and understand the effect of choices made by patients, payers and physicians on the patient's desire for a better quality of life." Dr. Ellwood proposed that the solution was the creation of a "technology of patient experience" to allow patients, payers and providers to make rational medical care related choices based on data which shows the effect of those choices on the patient. His vision was to weave together those differing perspectives through a collaborative effort he labeled as "outcomes management." The outcomes movement as it exists today arose in great part from Ellwood's vision. [Ellwood, 1998]

Assessment and Accountability

Despite the mounting evidence that variations in utilization and patterns of care existed, clearly the strongest force behind the outcomes movement has been the emergence of managed care. In an increasingly competitive health care environment, reducing costs while maintaining quality has become critical. In 1988, Arnold Relman, MD, former Editor of the *New England Journal of Medicine,* described the health care system as entering into the third revolution of medical care "assessment and accountability" [Relman 1988]. He sounded the call to arms for physicians to become involved in determining the cost, safety and effectiveness of all things physicians do or employ in diagnosing, treating and preventing disease. Organized medicine is being called upon to define quality and reduce the variations

continued on page 21

Journal of Neurosurgery Prepares for Next Century; Plans New Spine Edition

The field of medicine has changed by leaps and bounds over the past 10 years with thousands of new techniques, methods and approaches being introduced as well as non-medical influences like computers and the Internet. How does the oldest, highest-ranking neurosurgical journal in the world keep up? It's simple: Innovation and quality.

The *Journal of Neurosurgery* has made several changes over the past few years in response to the changing needs of its subscribers, including: Initiating a new spine edition; launching an on-line, topic-based journal; reducing acceptance to publication time; and decreasing costs while increasing sales.

The Basic Facts

Nearly 55 years ago, the *Journal of Neurosurgery* became the first medical journal dedicated to the newly blossoming field of neurological surgery. When John A. Jane, MD, PhD, was selected Editor in 1992, there had been just five editors before him. The *Journal* was started in 1944, the official scientific publication of the Harvey Cushing Society in 1959, and became a monthly publication in 1962.

Today, the *Journal of Neurosurgery* remains the official journal of The American Association of Neurological Surgeons, and has a circulation of over 12,000 in more than 50 countries. The *Journal* has a higher Scientific Citation Index ranking than all other neurosurgical journals combined and is ranked third among all surgical journals in the world.

In addition, increased revenues over the past several years from the *Journal* have played an integral role in supporting the educational mission of the AANS.

The Editorial Board of the *Journal* is responsible for all content and business decisions. The Board includes: Howard M. Eisenberg, MD, Baltimore, MD; Julian T. Hoff, MD, Ann Arbor, MI; John P. Girvin, MD, London, ONT; Donald P. Becker, MD, Los Angeles, CA; Edward R. Laws, Jr., MD, Charlottesville, VA; Robert A. Ratcheson, MD, Cleveland, OH; M. Peter Heilbrun, MD, Salt Lake City, UT; Charles J. Hodge, MD, Syracuse, NY: Edward H. Oldfield, MD, Bethesda, MD; Ralph G. Dacey, Jr., MD, St. Louis, MO; H. Richard Winn, MD, Seattle, WA; Lawrence F. Marshall, MD, San Diego, CA; Edward C. Benzel, MD, Albuquerque, NM; James T. Rutka, MD, Toronto, ONT, and Volker K. H. Sonntag, MD, Phoenix, AZ.

The editorial offices of the *Journal* are located on the University of Virginia campus in Charlottesville. There are 15 staff members who are responsible for managing the publication, editing the manuscripts, fulfilling subscriptions, designing tables, processing submissions, and layout and design.

A New Spine Edition

In January, 1999, the *Journal of Neurosurgery* will launch a new spine edition. It will be dedicated to the radiology, pathology, biomechanics, neurophysiology and molecular biology of the spinal cord, vertebra and supporting structures.

"Approximately 70 percent of the work neurosurgeons do in practice is spine," Dr. Jane, said. "But, currently, only about one-sixth of the articles accepted for publication in the *Journal* are spine-related. Neurosurgeons are not the only ones doing spine surgery and this is an opportunity for us to reinforce the fact that we are the leaders in this field."

The Editorial Board and staff of the *Journal* considered several alternatives—including purchasing several existing neurosurgical publications—before deciding to add a spine edition. The *Journal of Neurosurgery: Spine* will be published quarterly beginning in January, 1999.

"After a year, we will evaluate the new edition," Dr. Jane said. "This may become a separate journal with its own editorial board in the future."

Submissions to the spine edition will go through the same rigorous review process as submissions to the *Journal*. After the inaugural year, any changes to the edition will have to be approved by the full Editorial Board of the *JNS*.

"The idea to expand was brought forth more than two years ago, " Managing Editor J. Keller Kaufman-Fox said. "Deciding to start the new edition was a very thorough and rational process."

Neurosurgical Focus

When **NEUROSURGERY://ON-CALL®**, the official Web site of the AANS and Congress of Neurological Surgeons, was launched two-and-a-half years ago, the *Journal* Editorial Board recognized a golden opportunity to deliver timely information to the neurosurgical community. *Neurosurgical Focus*, an on-line monthly journal that concentrates on one neurosurgical topic each issue. Associate Editor Martin Weiss, MD, chooses the monthly topic and the topic editor for each edition. Manuscripts are submitted and peer-reviewed just like the *Journal of Neurosurgery*.

"The advantage to *Neurosurgical Focus* is that it is timely, complete and there's a variety in style and content," Dr. Weiss said. "We work only a month or two ahead and each topic editor has his own strengths. The format also allows you to see varying approaches, opinions and techniques for the same problem all at the same time."

Over 800 users typically visit *Neurosurgical Focus* each month. The journal is accessed through the Professional Pages Section of **N://OC®** (www.neurosurgery.org). The new issue is posted on the 15th of the month, and hard-copy reprints of articles can be ordered through the JNS office.

Reduced Time From Acceptance to Print

A record 1120 manuscripts were submitted to the *Journal* in 1997 and about 25 percent were accepted. One of the goals of the *JNS* over the past several years has been to reduce the time between acceptance and actual publication. In 1994, the average length of time between acceptance and publication was 8.3 months, and by 1997 that time was reduced to 4.4 months, well below the industry average.

"We strive to get the research out as quickly as possible," Kaufman-Fox said. "Every day there are advances, and the longer these manuscripts wait in a filing cabinet, the less fresh they are. The scientific community relies on the timely exchange of ideas and information and we did not feel that a 6-month turnaround was acceptable."

One of the primary reasons for the reduced turnaround time is less composition time.

"We brought the composition, or design aspect of the publication in house," Kaufman-Fox said. "This makes the whole process much more efficient. We also send most of our files electronically back and forth to the printer and this cuts down on time."

The changes have also reduced the *Journal's* printing and composition bills by nearly half since 1994.

International Marketing

The *Journal* is more than just an American publication, with approximately 40 percent of subscribers and 60 percent of manuscript submissions coming from outside of the United States. In the past two years, the *JNS* staff has traveled to neurosurgical meetings in Germany, the Netherlands, Japan and Turkey to sell subscriptions, demonstrate *Neurosurgical Focus,* sell back issues on CD-Rom and the *Journal.* In 1998, the *Journal* will travel to meetings in Germany, Japan and Chile.

"The *Journal* is the oldest and the highest ranked neurosurgical journal in the world, but we can't just sit back on our laurels and wait for subscribers and authors to come to us," Kaufman-Fox said. "There are a lot of choices out there and it's important we maintain a strong presence. It's also beneficial to go out and actually talk with our subscribers and authors and see what they like and don't like about the publication."

FROM SUBMISSION TO PRINT... HOW YOUR MANUSCRIPT BECOMES PUBLISHED

Every year more than 1100 manuscripts in large envelopes find their way to Charlottesville, Virginia, in hopes of being published in the *Journal of Neurosurgery.* But, what happens to a manuscript and how does it eventually end up in the "accepted for publication" pile?

Step One: The Front Door.

All submissions are opened and date stamped on arrival. The basic format of the paper is checked to ensure the author has followed the contributor's instructions. Approximately 20 percent of submissions are sent back to the author at this stage because the manuscript was not prepared in *Journal* style.

"The most common mistakes are that the references aren't in alphabetical order and the figures aren't cited correctly," Managing Editor J. Keller Kaufman-Fox said. "I can't stress enough how important it is to read the Instructions to Contributors and to call if you have a question. We're here to help you at least get the paper to the next stage."

The Instructions to Contributors are located in the back of each issue of the *Journal,* or can be obtained by calling the JNS office.

If the submission is in the correct format, it is entered into the database, given a manuscript number, categorized by type of paper, and an acknowledgement letter is sent to the author.

Step Two: The Review Process.

John Jane, MD, PhD, editor of the *Journal,* initially classifies each manuscript and selects the four reviewers. The manuscript is sent to the first, or primary, reviewer, who makes his comments and passes it on to the second reviewer. If the first two reviewers are in agreement, the manuscript and comments are sent back to either one of the co-chairmen, Drs. Julian Hoff or Howard Eisenberg. The Chairman reviews the manuscript, makes comments, and then synthesizes all of the reviewer's comments for final review by Dr. Jane.

If the first two reviewers did not agree, the manuscript is sent to the third and/or fourth reviewers before going to the selected chairman. Any reviewer can send a manuscript to an "outside" reviewer at any time. During the course of a year, each *JNS* Editorial Board member can expect to be the primary reviewer on approximately 100 manuscripts and review approximately 150 additional manuscripts on a second, third or fourth review. The two chairmen each review over 550 manuscripts each year, and Dr. Jane performs the final review on each manuscript that has been submitted.

Besides a general review for scientific significance, accuracy and logic, the papers are given a "priority score" that indicates how important the reviewer feels that the paper be published and read by the neurosurgical community. The priority score is based on four elements: Scientific merit, neurosurgical significance, reader interest and publishing grade.

It takes about 30 days for the initial review process to be completed. If the paper is accepted, the author is notified and the manuscript moves on to the next stage. However, only two to three percent of manuscripts are accepted as is with no revisions.

Dr. Jane reviews all of the reviewers comments and drafts a letter to the author either suggesting revisions to the paper, or outright rejecting it. In either case, at this time the author is sent back a letter explaining the status of the paper, the reviewers comments and the manuscript.

"Most of the articles we receive are technically very good, but they just don't make the priority score," Dr. Jane said. "This is an education process for everyone and that is why it is so important for the authors to see the reviewer's comments and take note of the strengths and weaknesses of the paper and to feel they were treated fairly."

A paper that has been sent back for revisions has not been officially rejected or accepted. Often times in revisions, reviewers ask that the author use a different statistical method, compare the paper to a similar published paper, provide more materials and methods detail, or make other adjustments. After the revisions have been completed, the

(continued on page 12)

Meet John A. Jane, MD, PhD

Not many names are more recognizable in present day neurosurgery than John Jane. He is an educator, a program chairman, an editor, a researcher, a lecturer, a surgeon who performs more than 500 surgeries a year, and a devoted husband, father and grandfather. He is Chairman and Professor of the Department of Neurosurgery at the University of Virginia, Editor of the *Journal of Neurosurgery* and developer of various neurosurgical techniques.

The words of actor and patient Christopher Reeve brings tears to his eyes, the sight of one of his grandchildren creates an instant smile on his lips, and his face beams with pride when he talks about his son, John Jane Jr., MD, a neurosurgical resident. The *Bulletin* found Dr. Jane in Charlottesville, VA, fresh out of his garden and willing to sit down and chat.

Q: What do you feel is some of the most exciting research being done in neurosurgery today?

A: The applications of gene therapy are remarkable. Nothing has really happened yet, but the potential is there to revolutionize a great deal of what we do as neurosurgeons.

Q: What types of articles would you like to see more of in the *Journal*?

A: It would be nice to have more randomized clinical trials and more science, but not necessarily basic science. I would also like to see more pediatric and spine submissions.

Many of our authors concentrate so much on "positive" results, but sometimes disproving your hypothesis is equally important and can have a significant impact on how other researchers approach their projects in the future.

Q: In your own practice, you have not specialized and practice all aspects of neurosurgery. Which types of cases do you enjoy the most?

A: The pediatric cases, definitely.

Q: You have been known to slip in and out of cities, and even countries, in the same day, do you enjoy traveling?

A: No, not at all. If I never traveled again, that would be fine with me. I would much rather be at home either in my garden and with my family, or at the *Journal* or operating.

Q: Your son, John Jr., is a neurosurgical resident in the UVA program, how has that worked out?

A: Between us, it has worked out fine and we can easily leave the OR and work behind us when it's time to go home. It did take some time for the other residents to trust him, but that has worked itself out now that it's clear that he's not telling tales about the day's happenings at home. On a personal side, it has been absolutely wonderful to work next to my son.

Q: During their fifth year, you send your residents to England for a year. Why?

A: I started that back in 1970 as a deal with a friend over there. My residents gain a huge operative experience, see a different view and love the whole thing. They gain a great deal of independence over there, which is something that's hard to establish here because they are so closely supervised. They always come home better surgeons and that's why we continue the program.

Q: What have you learned from being Christopher Reeve's surgeon?

A: Chris is an amazing person. He has successfully reenergized and focused interest on the field of neural regeneration and brought it up to the forefront of research.

He has also had an impact on legislation that will affect research funding for all neuroscience. He thinks, and I agree, that if you take a strong stand and believe in what you're doing, you can accomplish just about anything.

FROM SUBMISSION TO PRINT... (continued from page 11)

manuscript is resubmitted and sent back to the reviewers. From there, it is either accepted, rejected or sent back for more revisions.

Step Three: Acceptance!

Approximately 25 percent of the manuscripts submitted to the *Journal of Neurosurgery* are accepted. The author is notified of the acceptance and the manuscript is placed in the "accepted" drawer by type of article—clinical, laboratory investigation, case report, technical note or historical vignette. Once a month, all of the accepted papers are taken out and Dr. Jane chooses the papers and the order for an upcoming issue—usually three to four months in advance of publication.

Step Four: Edit, edit, edit

Once the articles have been chosen, the staff of the *Journal* takes over. The manuscript is requested on computer disk and is translated into the *Journal's* computer system. Each paper receives between 4 to 8 hours of heavy editing and proofreading during which the authors may be called upon to answer questions. The figures and any art are sent directly to the printer for digital preparation. Tables are developed and edited, and each reference is checked at its original source.

Once the article has been edited, the text is dropped into an actual proof of the page as it will appear in the *Journal*. This galley goes to proofreading to be edited for grammar and spelling. The tables are also placed on the page. After proofreading, the author is sent a copy to review and has 48 hours to fax in any changes. The page goes through one last editing and proofreading before the electronic files and layout heads off to the printer. The figures, any art and the advertisements are added at the printer and a "blue line" proof is sent back to the *Journal* office about three weeks later when everything is checked one more time.

"The amount of time and detail that is spent on each article is substantial," Kaufman-Fox said. "Just checking all the references at their original source is a big job. We check the original source, not just any source where the reference has been cited before, because we have found references that have been listed wrong dozens of times."

The *Journal* is printed by Cadmus Journal Services in Easton, MD, and is mailed 10 days prior to the issue month.

MANAGED CARE update

Direct Contracting—Does it have a future?

By John A. Kusske, MD

"We're on the verge of seeing providers going directly to employers and cutting out insurers, or using captive insurers such as hospital-owned HMOs," says Professor William Brandon, Health Policy Analyst at the University of North Carolina. On January 1, 1997 the Minneapolis-St. Paul, based Buyers Health Care Action Group (BHCAG) went live with their Choice Plus health plan that provided a continuum of services for 100,000 members. Choice Plus members picked the care systems they wanted to join based on a combination of perceived value and out-of-pocket costs. The BHCAG, a coalition of 26 large, self-insured employers issued a direct request for direct contracting to a variety of Minnesota physician and hospital groups. Specifically, according to *Integrated Healthcare Report,* they wanted primary care-centered health systems and the affiliated physicians could only be aligned with one system. Direct contracting was seen as the best way to the get the consumers and providers back into the center of the purchasing process, while breaking down the market control of the existing HMOs in the area.

An Example of Direct Contracting

Direct contracting between employers and providers has been around in this country for many years. The BHCAG approach, however, has some unique features, which are consistent with the modern managed care marketplace. First, the payments to the care systems have a fee-for-service basis. However, the care systems are also required annually to make a bid in terms of a prospective claims dollar target per member per month. That is to say the systems are required to submit a budget. Employers set a maximum monthly contribution they will make toward paying the amount and inform the employees of the difference they will have to pay out of pocket. In addition the per member per month (pmpm) charges for any care system are "risk-adjusted" based on the acuity levels determined retrospectively. After that the Care system fee schedules are prospectively adjusted up or down during the year based on actual claims experience to ensure that they do not exceed their annual risk-adjusted budgets. The system for paying providers has other nuances including stop-loss thresholds and carveouts but the primary method of compensating the physician is RBRVS and the hospitals receive a modified DRG-based payment for services.

The jury is still out in terms of the ultimate success of the BHCAG's new venture. According to *Hospitals and Health Networks* initial bids in 1997 came to 8.5 percent below projected target levels; however, in 1998, bids from these systems have been running about 16 percent above 1997 levels and their competitors—the state's biggest three managed care systems—have asked for premium increases of 17 to 25 percent.

Does Direct Contracting Have a Future?

There are many other examples of direct contracting efforts from around the country. These, of course, are only vignettes in direct contracting. There are changes in market forces that suggest something bigger is coming. As we indicated in our last column, consumer concerns about HMOs sacrificing their care for the sake of profits are still making the news. All of the state and national bills to protect health plan members carry a cost. Meanwhile, HMOs have reported operating losses in multiple states and those aware are predicting double-digit premium increases. The question is, will the purchasers be willing to pay for the operating losses and reforms all at the same time?

In general, according to *Integrated Healthcare Report,* market conditions appear ripe for more direct contracting and a move to self-insurance, particularly among the small to medium size companies. At the same time, Medicare and Medicaid are also exploring direct contracting through PSO pilots as defined in Medicare Part C. Double digit HMO premium increases in 1998 could be the cause of a landslide in this direction. The move to direct contracting won't happen everywhere because in some markets, neither employers nor providers may be ready to play.

Also driving the shift to direct contracts are employers in search of ways to save money and seeking more flexibility and control over benefits design and provider networks. Many of the PPO and point-of-service products on the market have not saved employers money so they are looking for alternatives. It has been stated that under the right circumstances direct contracting can save 30 to 60 percent over fee-for-service.

Of great interest to most physicians is the fact that many employers are developing an active dislike for HMO methods. Dr. Robert Galvin who is the head of General Electric Company's $2 billion a year healthcare program recently said, "HMOs cannot win because they do not satisfy purchasers, providers or patients." Among the complaints: inflated administrative costs, hefty profits and huge executive salaries. They're also disturbed by capitation. They say, capitation rewards doctors and hospitals for cutting prices, but not for improving quality or meeting other benchmarks. They also say they don't get enough quality information from HMOs and many more complaints. The bottom line is that the concept of buying healthcare on the spot market may be reaching the end of the line.

The question that neurosurgeons should be asking is whether this potential market shift is just a passing phase, or a fundamental change? In any given market this will take agreement between purchasers and providers. Purchasers must see direct contracting as more than a way to keep HMOs from increasing their prices. Providers must be serious about developing fully integrated, efficient healthcare entities. They can't view their loosely aligned Physician-Hospital Organizations as just another bargaining cartel. It may be that we are not there yet.

1998 Annual Meeting Brings Together Research and Socioeconomic Issues

Members Honored For Service, Research

Over 6100 neurosurgeons, nurses, physicians and other professionals from 48 countries gathered in Philadelphia for the 66th Annual Meeting of The American Association of Neurological Surgeons from April 25–30, 1998.

William Chandler, MD, served as Annual Meeting Chairman, and the Meeting combined a solid Scientific Program with 8 scientific sessions, 30 hands-on clinics, 83 educational seminars, and 8 Joint Section Sessions with a strong mix of socioeconomic issues that are facing neurosurgeons. The Scientific Program was chaired by L.N. Hopkins, MD, and featured 130 research papers and 550 poster exhibits. Attendees also had the opportunity to view more than 520 technical and institutional exhibits that were on display.

Program Highlights

Ronald D.G. McKay, PhD, was the Decade of the Brain Medallist and delivered his lecture "From Stem Cells To Circuits, Early Steps In Brain Development" on Monday. The Medal has been given annually since 1991 to a distinguished neuroscientist for his contributions to brain research.

Also on Monday, Edward R. Laws, MD, delivered his Presidential Address, which focused on the history of neurosurgery, to a packed lecture hall. The full text of Dr. Laws remarks will be published in the December issue of the *Journal of Neurosurgery.*

On Tuesday, Gary G. Ferguson, MD, discussed the Final Results of North American Symptomatic Carotid Endarterectomy Trial (NASCET), which concluded that carotid endarterectomy is beneficial on patients with 70 percent or more stenosis. Robert Spetzler, MD, was the 1998 Richard C. Schneider Lecture and his presentation was entitled "Vascular Lesions of the Spinal Cord: New Concepts and Treatments." The Cushing Oration was delivered by Eric Wieschaus, PhD, and he lectured on "What Fly Genes Can Tell Us About How Human Embryos Develop."

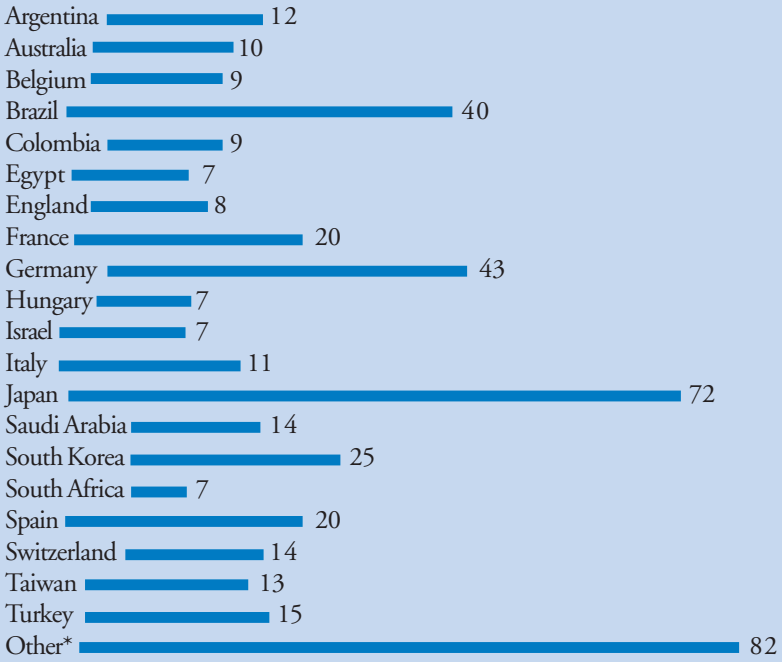
On Wednesday, Axel Perneczky, MD, gave a special lecture on "The Future of Minimally Invasive Endoscopic Neurosurgery." There was also a Special Symposium on the Dramatic Socioeconomic Changes Affecting All Neurosurgeons, which was moderated by Stanley Pelofsky, MD, and panelists included Arthur L. Day, MD, Katie Orrico, JD, and John Kusske, MD.

Business Meeting

The Annual Business Meeting was held on Monday, April 27. Secretary Stanley Pelofsky, MD, reported on the Association's activities for the year, and outgoing Treasurer Stewart Dunsker, MD, provided

Outgoing Vice President William Shucart, MD, (left) presents Lee Finney, MD, with the 1998 Humanitarian Award.

ANNUAL MEETING ATTENDEES FROM OUTSIDE OF NORTH AMERICA



*Includes: Austria, Bahamas, Chile, Denmark, Dominican Republic, Ecuador, El Salvador, Finland, Hong Kong, India, Iran, Jordan, Lebanon, Macedonia, Marshall Islands, Morocco, Netherlands, New Zealand, Norway, Paraguay, Philippines, Portugal, Serbia, Singapore, Slovak Republic, Sweden, Venezuela, and Vietnam.

an update on AANS finances. Russell L. Travis, MD, was installed as the 66th President of the AANS and Martin H. Weiss, MD, was elected President-Elect. In addition, Stewart Dunsker, MD, was elected Vice President and Roberto Heros, MD, was named Treasurer.

Award Winners

In addition to the Scientific Program, several members were honored for their contributions to the field of neurosurgery and the AANS:

Albert Rhoton, MD, Professor and Chairman of Neurological Surgery at the University of Florida, received the 1998 Cushing Medal, the Association's highest honor. He was recognized for his many years of outstanding leadership and dedication to the field of neurosurgery. Dr. Rhoton has been President of both the AANS and CNS, and has published more than 200 scientific papers.

Lee Finney, MD, was named the 1998 Humanitarian Award winner in recognition of his many years of dedication to neurological science, medicine, and community service. Dr. Finney has made dozens of trip to Honduras, providing badly needed neurosurgial care to patients, and has played an integral role in developing a neurosurgical training program in that country.

Incoming President Russell L. Travis, MD, (right) presents Mark J. Kubala, MD, with the 1998 Distinguished Service Award.

Outgoing President Edward R. Laws, MD, (right), congratulates Albert Rhoton, MD, on the Cushing Medal.

Neurosurgeons got the chance to view and operate the latest equipment in the Exhibit Hall.

Mark J. Kubala, MD, of Beaumont, Texas, received the 1998 Distinguished Service Award for his service to the medical field and neurosurgery. Dr. Kubala has held various AANS leadership positions and been an outspoken advocate for neurosurgery in the socioeconomic area. He also has been very active in the THINK First Foundation and in the medical community in Texas.

Kamal Thapar, MD, of the University of Toronto, was the recipient of the 1998 Van Wagenen Fellowship, which provides funds for a research fellowship outside of the North America for a year. Dr. Thapar will use the Fellowship to travel to the University of Erlangen-Nurnberg, Germany to study under Professor Rudolf Fahlbusch and Dr. Michael Buchfelder.

Outstanding Researchers

A number of outstanding researchers were also singled out for honors, including:

Kenneth Shulman Memorial Award: Michael Drewek, MD, "Quantitative Analysis of the Toxicity of Human Amniotic Fluid to Rat Fetal Spinal Cord Cultures"

William H. Sweet Young Investigator Award in Pain Medicine: Ali R. Rezai, MD

Preuss Resident Award: Matthias M. Feldkamp, MD. "Expression of Growth Factor Receptors in Glioblastoma Multiforme Cell Lines and Tumor Specimens Results in Ras Activation and Ras-Dependent Tumor Proliferation."

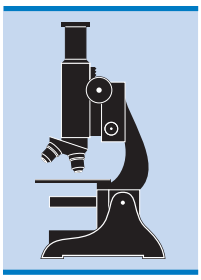
Mahaley Clinical Research Award: Prem Pillay, MD, "Endoscopic Transphenoidal Resection of Pituitary Tumors"

Young Investigator Award: Michael Hsiao, MD, "Mechanisms of p53 Induced "Bystander Effect" in Tumor Suppression: I. Evidence of Angiogenesis Inhibition in Vivo After Intratumoral Injections of p53/Cationic Lipsome Complexes.

The Cushing Oration was delivered by Eric Wieschaus, PhD, of Princeton University.

The 1999 AANS Annual Meeting will be April 24 –29 in New Orleans. LN Hopkins, MD, is serving as the Annual Meeting Chairman and Steven Giannotta is the Scientific Chairman.

Hope to see y'all there!



Christopher Reeve Advocates For Neuroscience Research Dollars

One afternoon actor Christopher Reeve was gracefully trotting through the vibrant show rings of the Virginia countryside. But in a split second, his horse stopped short of a jump and Reeve went cascading to the ground, partially severing his spinal cord just below C2. As one could imagine, Reeve's life has changed in just about every way. The man who once dazzled audiences as Superman, is now paralyzed from the neck down and needs the assistance of a ventilator to breath. However, "superheros" don't lose their magic powers that easily and Reeve is putting his strength into raising research dollars for neuroscience.

"The scientists know the path to success, but they are hampered by money," Reeve said at the recent Spinal Cord Injury 2005 Symposium held on the University of Virginia campus. "Only 20 percent of NIH grants are funded and we need to reverse our priorities in this country. In the next century we need to look inside to find the enemy. The Defense Department can't find this enemy, it's inside our bodies. We need to declare war on disease, put our own collective conscious behind it and then the money will follow, the scientists will follow, and there will be a vaccination for diabetes, multiple sclerosis, Alzheimer's and stroke."

Reeve advocates reducing the Department of Defense budget from $39 billion to $19 billion and putting the extra $20 billion into research funding. He also points out that the insurance industry made over $780 billion in 1997, but none of it was spent on research, and that setting aside just $1 from each policy premium would raise $26 billion alone.

During the Symposium, which was held during May, neuroscientists from around the world met to discuss advances in regeneration, neuroprotective drugs, fusion, gene therapy and other possible treatments for spinal cord injuries.

"In the year 2005, I won't be here sitting in this chair," Reeve said. "People think I'm naive to say I'll be walking in 7 years, but that is the challenge. President Kennedy didn't say 'let's go three-quarters of the way to the moon.' He said 'let's go all the way.' This is the way we should approach all neurological problems – Parkinson's, Alzheimer's, MS, stroke, spinal cord injuries. Research in one area will benefit the others."

During the conference, Zachary Hall, PhD, Vice Chancellor of Research at the University of California San Francisco and former Director of National Institute of Neurological Disorders and Stroke, stressed the importance of continuing to build the body of knowledge about the nervous system in order to develop new tools.

"Restoring function to these patients is a long, hard road, but even a small restoration of function can make a huge improvement in the quality of life," Dr. Hall said. "Broader knowledge about why neurons die will translate into treatment. This is going to take partnerships between government agencies, public and private sources. We know that the adult nervous system can rebuilt itself and that gives us the spirit of hope and cautious optimism."

John Jane, MD, PhD, Reeve's surgeon, also commended Reeve's efforts in raising funds, testifying in Congress and reenergizing the field of spinal cord regeneration.

"Year by year, our ability to treat these patients well improves," Dr. Jane said. "Neurosurgery will be different next year and could be almost unrecognizable in 5 years. If neuroprotective drugs are administered in field and the patient has a stable spine when admitted, with advances in fusion, gene therapy and other treatments, then the environment for regeneration is there."

NEUROSURGEON SPEARHEADS LOCAL EFFORT TO INCREASE HEAD, SPINE INJURY RESEARCH FUNDING

Like most neurosurgeons, Greg Helm, MD, sees a lot of patients with severe head and spine injuries. And, like many, he has an interest in head and spine trauma research and is always looking for additional funding. But, instead of tapping into the same old sources for research funding, Dr. Helm petitioned to create a new source of funding that hits right at the source of many injuries.

"I had heard about a few states taking a portion of speeding and drunk driving funds and funneling the monies toward research and prevention programs," Dr. Helm, an neurosurgeon at the University of Virginia, said. "So I called our local senator, Emily Couric, to see if we could introduce this idea to the Virginia Assembly."

From there, Dr. Helm became intimately familiar with the ups and downs of local politics as the Commonwealth Neurotrauma Initiative was created. The original bill was put together in 1997 and called for a surcharge on all speeding and drunk driving tickets. But, fearing that it appeared too much like a sin tax, the Virginia General Assembly voted down the proposal.

"They did create a Neurotrauma Research Board, which was a step in the right direction," Dr. Helm said. "The Board was to manage the funds and divide out the money, but there was no money to divide out."

Dr. Helm and Senator Couric regrouped and tried again in 1998 with a rewritten proposal. This time the proposal called for a $30 fee to reinstate a license that had been lost because of reckless driving habits. The bill was approved and will bring in an estimated $600,000 - $700,000 a year – enough to fund about 10 research projects. The newly created Scientific Advisory Board will review the grants and allocate funds to head and spine injury research proposals as well as rehabilitation projects.

"It's not easy getting a bill passed and you really have to ask around and find out who the party leaders are to avoid gridlock," Dr. Helm said. "But, we always need research money and we can't just rely on NIH dollars. We have to find local sources and this is something any neurosurgeon can do to increase research funding in their area."

Outcomes

continued from page 9

which lead to inappropriate treatment and unnecessary resource consumption.

Outcomes: Concepts and Definitions

Despite the growing interest in outcomes assessment and management, there is considerable confusion regarding the terms, concepts and their meaning.

There are four outcomes of any medical intervention:

- clinical indicators such as reduction of tumor size, mortality, recurrence rates;
- quality of life which measures the impact of treatment from the perspective of the patient;
- patient satisfaction which measures the satisfaction of the patient with the process and structure of care; and,
- cost or charge for the procedure or intervention.

Clinical Indicators

The observation of the clinical impact of medical interventions is not a new concept. Historically, whether the intervention of a medical treatment was clinically successful (i.e the patient lived or died, the tumor was removed, an infection was controlled with antibiotic) has been a central focus for health care providers. As the critical mass of potential treatment interventions and medical technology has increased, so have the differences in the approach to managing a disease process. The increasingly sophisticated array of treatment possibilities has also led to increased variation in utilization and cost. Be that as it may, however, the primary focus of any health care provider is to improve the health of his or her patient. Until recently, the "success" of any treatment intervention has been judged solely on whether clinically significant changes have occurred in the health of the patient.

Quality of Life

Within the past two decades, there has been an increasing emphasis on the impact of treatment from the perspective of the patient. This desire to scientifically measure the patient's quality of life prior to and following a treatment intervention has arisen from a combination of factors which include:

- increased involvement by patients as part of the healthcare team;
- increased emphasis on disease management as a way to control practice variation and costs;
- the need to assure an improved quality of life for the patient undergoing increasingly sophisticated medical interventions; and
- the need to collect data to assure quality and promote accountability.

The increasing emphasis on patient centered care is reflective of a growing concern relative to the impact of treatment from the perspective of the patient. It is no longer enough to "cure" the patient in a way which significantly impairs future quality of life and functional status. In addition, factoring in an assessment of the patient's quality of life, while determining the medical effectiveness of any treatment intervention, assures the maintenance of a high level of quality in the face of continued cost containment efforts. To borrow from the industrial model, the patient is the "customer", and must be kept in the center of any quality assurance or improvement efforts. In an increasingly competitive healthcare environment, reduction of costs will remain unacceptable if they result in a detrimental impact on the patient's quality of life and his or her ability to maintain or improve functional status.

Quality of life can be thought of as an umbrella term encompassing the overall health related quality of life as perceived by the patient. Broad domains routinely measured include:

- physical function, which refers to the patient's ability to perform daily activities as well as more strenuous activities;
- mental or psychological functional status which assess the patient's psychological well being and levels of cognitive functioning;
- social and role function which refers to both a social component (such as the ability to maintain contact with family and friends) and the quality of one's work (whether in home, school or work);
- general health perceptions which focus on the patient's self-rating of overall health. Research has shown that the patient's assessment of global health status is an important determinant of the outcome of treatment;
- symptom perception usually refers to self-reported levels of pain; and,
- sexuality which refers to the impact of treatment on the patient's body image and sexual functioning.

The hallmark feature of the measurement of quality of life is that it is longitudinal. Collection takes place prior to treatment, if possible, and continues at set points along the treatment continuum. This provides rich and useful data when used with the measurement of appropriate clinical indicators. As the trend toward looking at overall medical effectiveness from both a quality and cost perspective continues, looking at the impact of treatment from the perspective of the patient through systematically measuring quality of life will be essential.

Patient satisfaction

The topic of patient satisfaction has received greater attention as healthcare has become more competitive. It has also been the subject of increased debates about its utility. Total quality improvement efforts are organized, in part, to enhance the ability of healthcare providers to compete. Emphasizing patient satisfaction assists healthcare providers to make business and management decisions that will enable their practice to survive and grow. As part of the increasing climate of accountability, managed care organizations must demonstrate to purchasers that their patients are satisfied with the process of care provided. Employers must justify their decisions to contract with certain managed care organizations to their employees. Physicians must be able to prove that their patients are equally satisfied with the process and structure of care being provided.

More importantly, research has shown that increased levels of patient satisfaction leads to greater compliance on the part of the patient, which leads to better outcomes. This synergy is beneficial to patients, providers, employers and third party payers. A less than satisfied patient will have a slower rate of recovery (and return to work), consume disportionately more resources and have cost ramifications for both the provider and the managed care organization.

The purpose of any patient satisfaction survey is to assess the overall medical care as well as to obtain an evaluation of specific features of care. The features, or attributes, of healthcare typically measured

continued on page 22

Outcomes

continued from page 21

through patient satisfaction surveys include [Ware, 1983]:

- accessibility and availability of services and providers;
- choice and continuity;
- communication;
- financial arrangements;
- interpersonal aspects of care;
- outcomes of care;
- technical quality of care; and
- time spent with providers.

Cost or Charge

The cost for any treatment intervention has become increasingly more important as cost containment has become the primary goal in the era of managed care. Most recently, the cost or charges for care have been used as a surrogate for quality by third party payers making decisions about contracting with selected providers. Cost is also a significant factor in physician profiling efforts which are often tied to compensation rates.

The actual costs involved in a treatment intervention (i.e. physician time, allied health care provider time, drugs, etc.) involves a complex formula which is difficult, but not impossible to derive. More frequently, charges (i.e. fees for services, hospital stays, diagnostic tests) are used to evaluate the overall cost of treatment for a particular patient. Capitated contracts and mechanisms implemented by governmental payers have significantly limited reimbursement for many services provided patients. Cost or charge of treatment is an important component in determining the overall medical effectiveness of a treatment protocol or procedure. However, the deep cost containment efforts currently in place have impacted on patient care at a local level through layoffs of nursing and other support personnel and the reduction of time spent with the patient by the provider. In addition, the patient's quality of care is often impacted through "watchful waiting" prior to implementing treatment by an appropriate specialist. This has the effect of increasing the total length of the episode of care, which ultimately impacts on both quality and cost.

The research is clear that by improving the quality and effectiveness of care by reduction of variations through implementation of guidelines and effective outcomes management, costs of care are commensurately reduced. The implication of this research is an important factor in the emerging importance of outcomes management.

Outcomes Management

In essence, outcomes management is a systematic way to answer the questions asked to all patients *"How do you feel?"* and *"How are you?"*. Outcomes management also seeks to answer the question: " *What did treatment cost?"* The primary goal of outcomes management is to:

- use information and knowledge obtained through monitoring outcomes
- to achieve optimal patient outcomes; through improved clinical decision, and
- making and service delivery. [JCAHO, 1994]

By longitudinally measuring the impact of treatment from the perspective of the patient through measuring quality of life and patient satisfaction, as well as collecting clinically significant outcome data and the cost (or charge) for treatment, a picture of the most medically effective treatment intervention for a disease process can be developed. The goal for all healthcare providers is to provide the highest quality of care in the most cost effective manner based upon evidence which assists the provider and the patient to make the most appropriate healthcare decisions. By developing decision tools through the analysis of outcome data, such as guidelines and pathways for use by healthcare providers and patients, the highest quality of care, based upon accurate data, rather than intuitive decision making, is possible on a consistent and cost effective basis.

Summary

There are a number of compelling and significant reasons for implementing an outcomes management initiative. These include:

- the need to prove and improve the quality of care provided;
- the need to demonstrate a continued commitment to quality assessment;
- the need to negotiate effectively with managed care organizations;
- the need to determine the most medically effective interventions from both a quality of care and cost perspective;
- the need to have decision tools based upon data which will aid in clinical decision making; and
- the need for healthcare providers to have mechanisms in place to assess areas within their own practice requiring improvement.

In the current healthcare environment, with its increased emphasis on quality and accountability, organized medicine must express support for and leadership in the development of quality measures. Outcomes management is a natural outgrowth of that support.

The American Association of Neurological Surgeons and the Congress of Neurological Surgeons, through its Joint Committee on Outcomes, have committed support to providing tools to its membership for the collection of outcome data. Information about the work of the Committee is available through **NEUROSURGERY://ON-CALL®.** Members are also encouraged to contact Robert Harbaugh, MD, (603) 650-8732; e-mail Robert.E.Harbaugh@Hitchcock.org or Megan Morgan, Project Manager *(815) 574-8242;* pntsat@aol.com for help with individual outcome related projects or questions.

References

Ellwood, P: Shattuck Lecture: "Outcomes management, a technology of patient experience." N.Engl J Med, 319(23): 1549-1556, 1988

Relman A: "Assessment and accountability: The third revolution in medical care." N.Engl J Med, 319(19), 1220-1222, 1988

Wennberg, J, et al., Small area variations in health care delivery. American Association for the Advancement of Science, 1973

Wennberg, J, et al., "Are hospital services rationed in New Haven or over-utilized in Boston?" The Lancet, May 23, 1987

Wennberg, J, "Which rate is right?" N.Engl J Med, 314 (5) , 310-311 1986

The Dartmouth Atlas of Health Care, American Hospital Publishing, 1996

A Guide to Establishing Programs for Assessing Outcomes in Clinical Settings, Joint Commission on Accreditation of Healthcare Organizations, 1994

Measuring Medicine: An Introduction to Health Status Assessment and a Framework for Application, Faulkner & Grey, 1994

Section news

Pain Section Satellite Symposium A Success, Sessions Planned for Seattle

Jeffrey A. Brown, MD
Chair, Joint Section on Pain

The Joint Section on Pain sponsored a well-attended and highly successful Satellite Symposium preceding the recent Annual Meeting of the AANS, entitled, "Interventional Therapies in Neurosurgical Pain Management."

The Section is producing a CD-ROM of the symposium consisting of all the open session lectures during the two days. The speakers' slides have been digitized and synchronized to the edited, audiotaped presentations. Slides can be enlarged and reviewed in as much detail, taking as much time as is needed to understand them best. This CD should serve as an excellent curriculum for pain neurosurgery for neurosurgeons with a general practice, for those with special interest in pain neurosurgery and for residents in every training program in neurosurgery. It will be ready for distribution in July and can be purchased through the Joint Section on Pain and the AANS.

At the Annual Meeting of the CNS in Seattle, the Pain Section will integrate a mini-symposium on pain management into the two afternoon sessions sponsored by the Section. Topics will include, "Pain Management in a Clinical Practice," and "Neurosurgical Management of Chronic Pain." The first session will focus on what is needed to design a successful pain practice and to evaluate the outcome of treatment. The second session will review basic considerations of pain, rational use of opioids, and applications of augmentative and ablative techniques.

Ali Rezai, MD, from Toronto, Ontario, Canada was awarded the William Sweet Young Investigator Award of the Joint Section on Pain at the AANS Annual Meeting for his paper on the treatment of central pain using deep brain stimulation. This award and the Ronald Tasker Award, offered during the Annual Meeting of the CNS, continues the Section's commitment toward the career development of young neurosurgeons with interest in pain neurosurgery.

At the Annual Business Meeting, Ken Follet, MD, was re-elected to the position of Vice-Chair and Kim Burchiel, MD, to the position of Secretary-Treasurer. Richard Osenbach was elected to the Executive Council.

JOINT SECTION OFFICERS

Joint Section on Cerebrovascular Surgery

Chairman: Christopher M. Loftus, MD
Chairman-Elect: Issam A. Awad, MD
Secretary: Issam A. Awad, MD
Treasurer: Robert E. Harbaugh, MD
Past-Chairman: Steven L. Giannotta, MD
Membership Chairman: Joshua B. Bederson, MD

Joint Section on Disorders of the Spine & Peripheral Nerves

Chairperson: Stephen M. Papadopoulos, MD
Chairperson-Elect: Vincent C. Traynelis, MD
Secretary: Vincent C. Traynelis, MD
Treasurer: Curtis A. Dickman, MD
Past-Chairperson: Richard G. Fessler, MD, PhD

Section on History of Neurological Surgery

Chairman: T. Forcht Dagi, MD
Chairman-Elect: T. Glenn Pait, MD
Secretary-Treasurer: Michael Schulder, MD

Joint Section on Neurotrauma & Critical Care

Chairman: Brian T. Andrews, MD
Chairman-Elect: M. Ross Bullock, MD, PhD
Secretary-Treasurer: Michael G. Fehlings, MD, PhD
Membership Chairman: Alex B. Valadka, MD

Joint Section on Pain

Chairman: Jeffrey A. Brown, MD
Vice-Chairman: Kenneth A. Follett, MD, PhD
Secretary-Treasurer: Kim J. Burchiel, MD

Joint Section on Pediatric Neurological Surgery

Chairman: Marion L. Walker, MD
Secretary-Treasurer: Thomas G. Luerssen, MD
Membership Chairman: Ann-Christine Duhaime, MD

Joint Section on Stereotactic & Functional Neurosurgery

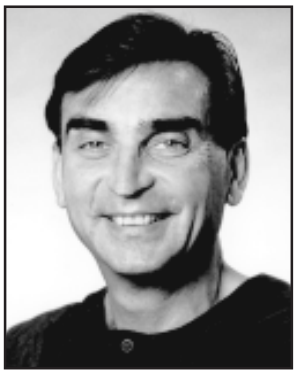
Chairman: David W. Roberts, MD
Vice-Chairman: Philip L. Gildenberg, MD, PhD
Secretary-Treasurer: Douglas Kondziolka, MD
Past-Chairman: L. Dade Lunsford, MD
Membership Chairman: Doug Kondziolka, MD

Joint Section on Tumors

Chairman: Mark A. Bernstein, MD
Secretary-Treasurer: Joseph M. Piepmeier, MD
Past-Chairman: William F. Chandler, MD
Membership Chairman: Michael W. McDermott, MD
Membership Services: Anthony L. Asher, MD

Secretary's report

AANS Busier Than Ever on All Levels



Stan Pelofsky, MD

Dear Colleague,

My first year as secretary for The American Association of Neurological Surgeons (AANS) finds me ever more respectful of the extraordinary organization to which I volunteer my time and energy; it is with a sense of accomplishment and pride that I share with you some of the main features of this year's activities. During this year, I have witnessed first-hand the commitment, intensity, and intellect inherent within the leadership and membership of this organization, and I have marveled at the many volunteer hours to which our colleagues throughout the field of neurosurgery have gladly devoted their many talents. Each of us benefits immensely from the wisdom of others in the field, and the AANS brings structure and purpose to our sharing of ideas in a way that motivates and encourages us to be more than we ever thought we could be. This wisdom and purpose is evident in our fundamental desire to provide leadership in academic, research, and daily practice issues and in our focus on service to one another.

Organizational Issues

Our pool of talent expanded this year as membership to the AANS continued to grow—our members now total 5,263, up from last year's count of 4,992. This new total reflects membership from the United States, Canada, and Mexico, and most certainly maintains a healthy status organizationally. The AANS is truly an international organization that affects the practice and the profession of neurosurgery everywhere.

Not only does membership seem firmly grounded, but our financial status also appears to be solid. Stewart Dunsker, MD, working closely with our financial advisors and in-house personnel, has integrated our organizational strategic plan with our financial plan and has created a sound fiscal strategy of which membership can be proud. Of course as the AANS embarks upon new (often more expensive) responsibilities and functions, the fiscal impact of these activities becomes a major concern. Our membership can feel confident that cost-saving measures are always considered when financial decisions are made.

Education

This year the Board has undertaken some exciting new projects. Under the leadership of Edward Laws, MD, the AANS, in close cooperation with the Congress of Neurological Surgeons (CNS), has declared that neurosurgery must once again assume world preeminence in cerebrovascular disease. Training neurosurgeons to become experts in the treatment of carotid disease, intracranial vascular disease, and endovascular technology has, therefore, become the focus of the Neuroendovascular Task Force, chaired by Mark Mayberg, MD. This Task Force has recently formulated a list of recommendations for neurosurgery program directors and large practice groups which encourages increased resident exposure to neuroradiology and endovascular training. Members of the Task Force are hopeful that the definition of neurosurgery will change to include neuroendovascular surgery and radiosurgery, and that documentation of experience in these areas will eventually be required for Board Certification.

The demands for advanced training in all fields of neurosurgery require even stronger fellowship training programs. In response to a resolution proposed at the Council of State Neurosurgical Societies, the AANS/CNS Joint Task Force on Fellowships was formed and is currently headed by Julian Hoff, MD. Charged with defining criteria for neurosurgical fellowships, this Task Force has recently submitted its executive summary which offers conclusions and recommendations for upgrading our fellowship standards, making them more precise and consistent. Currently, there are more than 127 neurosurgical fellowships in the United States, lasting from three months to two years, in 10 different areas of subspecialization. In an effort to rein in our definition of fellowship, the Task Force has recommended that written guidelines be developed for each fellowship, and that formal fellowships be at least 12 months in duration. They also recommend that the Residency Review Committee (RRC) be obliged to establish faculty qualifications and responsibilities, as well as institutional requirements for fellowships, in order to monitor their quality and their impact upon residency training.

Research

Neurosurgeons have never underestimated the importance of research; indeed, the AANS and CNS, as well as other neurosurgical organizations (e.g. Joint Sections) sponsor a diverse range of grants each year totaling over $280,000. Many of these opportunities offer incentives to neurosurgical residents and young neurosurgeons to pursue clinical or basic science research in fields such as neurotrauma or critical care, underscoring the importance of expanding our knowledge base in these crucial areas. At least thirty neuroscience research grants, fellowships, lectureships, or awards were available last year, ranging from an honorarium for the Donaghy lectureship, to the Young Clinician Investigator Award of $40,000, sponsored by the Research Foundation of the AANS. By recognizing and embracing those of us who emerge at the top of an already exceptional group of professionals, we simultaneously lift all of us up to the height of possibility.

Discovering what is possible, and then measuring it, is the purpose of the AANS/CNS Outcomes Committee, led by Robert Harbaugh, MD. During their meeting last fall, this committee approved a mission statement which recognizes the increasing importance of assessing quality of care in our rapidly changing health care environment. In addition, the committee set goals for 1998 which include, among other things, developing a plan for data collection, management, analysis and auditing; beginning Pilot Projects I and II which target Intracranial Aneurysm and Carotid Endarterectomy, respectively; developing educational materials for members including articles, information on the Web Site, and programming opportunities; and establishing an interface with the Joint Sections to assist in the development of disease specific outcome instruments. Clearly, the work of this committee is invaluable to maintaining and enhancing our already high standards of excellence.

(continued on page 32)

N://OC®
spring '98

Online Abstract Center Opens for Upcoming AANS and Section Meetings

The Online Abstract Center is now open on **NEUROSURGERY://ON-CALL®**. Abstracts are being accepted for the following meetings:

- 1999 Annual Meeting of The American Association of Neurological Surgeons
- 1998 AANS/CNS Section on Pediatric Neurological Surgery Annual Meeting
- 1999 AANS/CNS Section on Disorders of the Spine & Peripheral Nerves Annual Meeting
- 1999 Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery & American Society of Interventional and Therapeutic Neuroradiology Annual Meeting

Under the guidance of **N://OC®** Editorial Board member Joel MacDonald, MD, this year's online abstract submission process has been enhanced to include abstract editing services; e-mail confirmation; online submission of resident award summaries and department chairman letters; as well as an improved page design.

The Online Abstract Center is located in the Professional Pages section of **N://OC®** at http://www.neurosurgery.org. Click on the Online Abstract Center link on the Welcome Page. From there, users will be able to choose the meeting which they would like to submit an abstract. The online abstract form is the same as the paper form. All applicable fields need to be completed for proper review of the abstract.

Once the abstract has been submitted, an immediate confirmation page will appear on the computer screen. This page should be printed and filed as a record of submission. At the top of the confirmation page, there will be a username and password. This information is needed in order to edit an abstract. If an e-mail address for the primary author was entered, the option of receiving a confirmation by e-mail is also available. To do this, on the confirmation page, click on the button that says "Receive E-mail Confirmation" and one will be sent to the primary author's e-mail address.

Some award considerations require additional information be submitted (such as the 1,000 word Resident Award Summary for the AANS Annual Meeting or a letter from Program Director for the Mayfield Award for the Section on Disorders of the Spine & Peripheral Nerves Annual Meeting). This additional information can be submitted online as well. If the option to be considered for these award was selected, there will be a link on the confirmation page to the appropriate form.

If you have any questions about Online Abstract Submission, please e-mail abstracts@neurosurgery.org or call Allison Casey at the AANS National Office at 847-692-9500.

ONLINE ABSTRACT FAQ

How do I submit my abstract online?

Answer: If you have Internet access and a browser (such as Netscape Navigator/ Communicator or Internet Explorer), just go to http://www.neurosurgery.org. Click on Professional Pages to get to the Welcome Page. Then, click on the Online Abstract Center link and select the applicable Annual Meeting link.

How do I know my abstract was submitted successfully?

Answer: We provide two confirmations for online abstract submission. When you've submitted your abstract, you will receive an immediate on-screen confirmation page. Be sure to print this page for your records. You may also request an e-mail confirmation as long as you have entered an e-mail address for the primary author.

I've submitted my abstract but need to make some changes. What should I do?

Answer: You can edit your abstract using the username and password that were assigned to you on your confirmation page. Go to the Online Abstract Center, click on the appropriate Annual Meeting link, and click on the "Edit Your Abstract" link. This will take you to the revision form. Make your changes and click on the "Send in Changes" button.

What are the deadlines for abstract submission?

Answer:

- August 6th for the 1999 AANS Annual Meeting
- July 28th for the 1998 AANS/CNS Section on Pediatric Neurological Surgery Annual Meeting
- September 4th for the 1999 AANS/ CNS Section on Disorders of the Spine & Peripheral Nerves Annual Meeting
- September 16th for the 1999 Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery & American Society of Interventional and Therapeutic Neuroradiology Annual Meeting

I need some help with submitting abstracts online. Who should I contact?

Answer: If you need help submitting abstracts online or are having technical problems, please contact us by e-mail at abstracts@neurosurgery.org or by phone at 847-692-9500.

VIRTUAL EXHIBIT HALL OPENING SOON!

The N://OC® Virtual Exhibit Hall will re-open in August for the 1998 Congress of Neurological Surgeons Annual Meeting. Be sure to visit to get a sneak preview of the exhibit hall and get information on exhibiting companies.

Continuing Medical Education
with the AANS

The AANS Professional Development Program (PDP) brings you a schedule of CME courses that are designed to give you the best and most up-to-date educational opportunities for both clinical training and practice management. Courses available from July to December 1998 include the following:

Socioeconomic Courses

1998 Reimbursement Update for Neurosurgeons...

Reimbursement Foundations: Neurosurgical Billing and Coding for Efficiency

August 27-29 – Chicago, Illinois

Learn the "best practices" to use in neurosurgery offices for efficient coding and prompt billing and payment. You'll get practical hands-on coding experience that's neurosurgery specific. Register early – this popular course fills quickly!

Advanced Coding and Reimbursement Concepts in Neurosurgery

November 13-15 – Cancun, Mexico

This new course is for you if you have mastered reimbursement systems and practice management billing, and have a strong interest in correct coding.

Clinical Skills Courses

Neurosurgery Review by Case Management: Oral Board Preparation

November 8-10 – Houston, Texas

This entirely interactive course provides a review of clinical neurosurgery using case histories in a format patterned after the oral board examination. Work with expert faculty who will critique your neurosurgical skills and help you organize your responses to oral-board type questions.

Advanced Brain Anatomy for Nurses NEW!

November 21-22 – New Orleans, Louisiana

You will receive in-depth instruction of functional anatomy, associated pathology, and clinical syndromes with CT and MRI correlation. Through demonstration on cadaveric brain specimens, you will observe the three-dimensional aspects of the brain.

Spine Review – Hands-On: For Young Neurosurgeons NEW!

August 15-21 – Albuquerque, New Mexico

Learn from the best. This is the consummate course for residents, fellows in training or neurosurgeons who have been in practice for less than four years. Provides an in-depth review of anatomy, biomechanics, surgical exposure, decompression, and stabilization of the entire spinal axis. Covers the fundamentals and foundations of spine surgery, with an emphasis on the basic sciences – particularly biomechanics.

Advanced Surgical Pain Management NEW!

September 11-12 – Portland, Oregon

You will learn advanced information and hands-on training in interventional therapies for pain management, with a focus on both ablative and augmentative techniques for neurosurgical pain control in a variety of conditions. Working on models and cadaveric material in the hands-on sessions will allow you to develop experience in surgical techniques required for pain management surgeries. Also, practice with live Fluoroscopy.

Minimally Invasive Neurosurgery: Neuroendoscopy – Hands-On

October 30-31 – Cleveland, Ohio

This course gives you a comprehensive review of endoscopy and its expanding role in neurosurgery. Hands-on instruction allows you to gain expertise in handling a variety of neuroendoscopes while performing dissection exercises on cadaveric materials. You'll also participate in interactive discussions and reviews of video demonstrations about neuroendoscopic procedures.

For more information, or to register for a course, please call the Professional Development Department at 847-692-9500 or e-mail us at info@aans.org.

You may also register on-line through our Web site at www.neurosurgery.org

The AANS—Your Premiere Source for Neurosurgical CME

Kentucky Neurosurgeon Elected President of the AANS

Russell L. Travis, MD, of Lexington, Kentucky, became the 66th President of The American Association of Neurological Surgeons (AANS) during ceremonies held at the Association's 1998 Annual Meeting in Philadelphia, Pennsylvania.

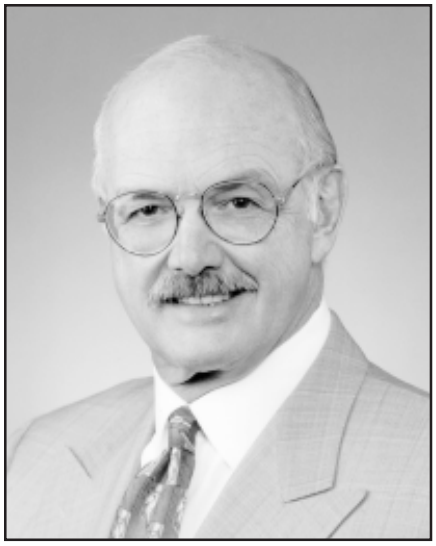
Dr. Travis is currently in private practice in Lexington, Kentucky. He has been active in the AANS since 1974 and has served as Director-At-Large of the Board of Directors since 1993. Dr. Travis has served as Chairman of the Physician Reimbursement Committee, Humanitarian Award Committee, and the Joint Section on Disorders of the Spine and Peripheral Nerves. For more than a decade, he has played a key role in the leadership of the AANS/Congress of Neurological Surgeons (CNS) Washington Committee, speaking frequently before Congressional Committees in support of organized neurosurgery.

In addition to his volunteer activities with the AANS, Dr. Travis has been actively involved in his local medical community, serving as Chairman of the Kentucky Medical Association, President of the Kentucky Epilepsy Association and President of the Kentucky Neurological Society.

Dr. Travis earned his bachelor's degree from Centre College and his medical degree from the University of Louisville. He served his general surgery internship at the University of Louisville Hospitals and his neurosurgical residency at the Medical College Hospital of South Carolina (MCHSC).

A frequent lecturer on numerous aspects of neurological surgery, Dr. Travis has spoken on such diverse topics as cerebral vascularization, carotid endarterectomy, lumbar disc disease and the management of spinal fractures.

In recognition of his achievements in the field of neurosurgery, Dr. Travis received the 1993 Distinguished Service Award from the Congress of Neurological Surgeons; the 1992 Jack Trevey Award from the Fayette County Medical Society for his leadership in bringing healthcare to the underinsured and uninsured of Kentucky through the Kentucky Physicians Care Program; the 1992 Health Hero Award; and the 1990 Service to Mankind Award of the Kentucky Medical Association/Kentucky Health Care Access Foundation.



Russell L. Travis, MD

Dr. Travis is married to Jill Travis and they have four children, Glen, Lee, Barry and Britini.

Following are some brief comments from Dr. Travis as he embarks upon his year as President of the AANS. If you have questions for Dr. Travis, he may be reached at his e-mail address: rlt@neurosurgery.org

What are some of the key issues facing neurosurgery in the year ahead?

The big issue is loss of the total scope of neurosurgical practice by erosion of our practice base from encroachment of other specialties. The two biggest threats right now are in spine and cerebrovascular. In spine, we have gained considerable ground from the benefit of David Kelly's Spine Task Force and AANS practical courses to teach neurosurgeons how to do more complex spine procedures. A current threat is the loss of cardiovascular practice to interventional radiologists, cardiologists and neurologists unless we train more neurosurgeons to be involved in taking care of strokes and learning catheter and interventional techniques. We can do this by becoming partners with interventional radiologists and cardiologists and by training more interventional neurosurgeons.

If you could accomplish just one thing during your Presidency, what would it be?

Get every neurosurgeon involved in the care of cardiovascular problems at the basic level. This would be accomplished by beginning a "brain attack" program at the local hospitals. Neurosurgeons should be available to take care of strokes and to seek stroke referrals from primary care physicians and ER physicians. This is where accumulating a practice of AVM's, aneurysms, intracerebral hemorrhages, and endarterectomies begin. We need to get neurosurgeons back to the cath lab. Neurosurgeons gave away catheter techniques years ago to radiology. We begin by revisiting catheter techniques and practical PDP courses and then doing simple catheterization procedures in combination with cardiologists and radiologists to treat strokes and other vascular problems.

The second thing I would like to accomplish would be to get every neurosurgeon involved more in community and political affairs and take a larger share in determining our future.

Describe your current practice, including any special interests.

My current practice is a 5-person group that covers the entire scope in neurosurgery. We have intergroup specialization, but, in general, we all do most neurosurgical procedures. I practice with a great group of neurosurgeons. All of my current partners are extremely competent, talented, honest,

continued on page 28

President of the AANS

continued from page 28

dedicated and hardworking people. To have a group with such integrity, honesty, principle-based and hardworking is truly a great gift and privilege.

What philosophy have you used to build your own practice?

My number one principle has always been to never allow the practice to be a "triage" type practice. I have always taken young neurosurgeons who are honest, talented and who believe in hard work and strive to keep up with all available and new worthwhile developments in the field of neurosurgery. We live by former coach, Bill Bryant's tenet, "Be good or be gone."

As you begin your Presidential Year, is there any one message you have for members?

Enjoy your work! As we face encroachment from the government, more competition from other specialties, and decreased reimbursement, remember that we do this for the patients. The personal relationships and the satisfaction of being a neurosurgeon is still the raison d'etre for our lives.

Stay current with all new developments, but keep your integrity. Don't ever do a procedure just because it is new and pays well. Don't develop a "siege mentality." The citadel of medicine has not fallen. We will be neurosurgeons for a long time. Compensation will change and decrease, but we will still make more than a comfortable living and be privileged to help people and the personal satisfaction of a wonderful career.

What have been some of the more significant changes in neurosurgery since you began your career?

The technology. I did not even use an operating microscope when I finished my residency. Now as I load a MRI scan into my stealth frameless sterotaxi unit for a craniotomy or pedicle screw fixation case, I never cease to be amazed at the technology. Neurosurgery has never been more interesting, or challenging, than it is today.

What advice would you give to a young neurosurgeon who is just starting out?

1. Keep up. Don't every allow yourself to become outdated in a field as complex and rapidly changing as neurosurgery.
2. Maintain honesty and integrity. The "money pot" is not going to dry up. You have 25-30 years to make your living. Much of your retirement will come from investments and planning. You do not have to make your future secure in one or two years.
3. Align yourself with groups and people with talent and integrity. For most areas of our country, the solo neurosurgical practice is going to be difficult to maintain in the future. Settle where you have a practice that offers all challenges of neurosurgery and with a group that gives you support in many ways. Perhaps, more importantly, save time for your family.

What are some of your interests outside of medicine?

1. My family, my wife and four children. They are a delightful family and bring me back to reality when I get in these phases when I think we have to solve all the problems facing medicine and neurosurgery. My recent marriage two years ago brought a 16-year old stepson and a 14-year old stepdaughter into my life, whom I have enjoyed immensely. I have watched more baseball and softball games than I ever thought imaginable.
2. Motorcycling and boating. I enjoy being outside and seeing all of God's beautiful country. The quietness and solitude of touring on my bike or sitting on my houseboat in the back of a cove on the lake are among my greatest pleasures.

What do you plan on doing 10 years from today?

If I am too old to operate and continue to do neurosurgery, I will be developing whatever I choose to be my "second career."

Governance

continued from page 5

MD, was appointed Associate Editor, Socioeconomic Issues.

SMART Program

Member participation in the AANS/CNS Getting SMART about Neurosurgery: Lumbar Spinal Stenosis and the Aging Patient - has exceeded expectations. More than 400 members have ordered and are using the program materials in their practices. As a consequence, supplies of the various brochures, slides, etc. have been exhausted and additional quantities need to be produced. The Board approved additional funding to produce the items required to fill backorders and to maintain an inventory for future orders. The Congress of Neurological Surgeons (CNS), as the program's co-sponsor, also approved their share of the additional funding.

A proposal by Warren Selman, MD, for the next Getting Smart Program – focusing on stroke and cerebrovascular disorders was presented and approved. Program materials should be ready for distribution at the time of 1999 Annual Meeting of the AANS/CNS Section on Cerebrovascular Surgery. This program will also be co-sponsored by the CNS.

New Officers

At the Adjourned Board Meeting, President Russell Travis, MD, welcomed three new Board members: Volker K.H. Sonntag, MD, Fremont P. Wirth, MD, and William F. Chandler, MD, became Directors-at-Large. In addition, Stewart B. Dunsker, MD, moved from Treasurer to Vice President; Roberto Heros, MD, moved from Director-at-Large to Treasurer, and Martin H. Weiss, MD, assumed the position of President-Elect.

Positions

spring '98

TALLAHASSEE

Multi-specialty group in Tallahassee in seeking a board certified or eligible **Neurosurgeon** to join its interdisciplinary team in the summer of 1998. The practice has a strong reputation in the area as a quality provider of orthopedics, neurology, physical therapy, and pain management. The practice also features MRI and Orthotics on site. You will be joining the medical team at the main location in Tallahassee to help expand the services provided. Competitive compensation and benefit package offered.

Tallahassee, the state capital, is a beautiful community in northern Florida where tradition and family are priorities. As the capital, government offices share the largest sector of the labor force, followed by services and retail trade. Two universities, Florida State University and Florida A&M, and Tallahassee Community College attract highly educated professional and researchers. With a population of 133,000 and a diverse economy, Tallahassee has qualities of both a small town and a metropolitan city.

Qualified and interested candidates please fax your CV to K. Young, Specialty Care Network (303) 716-6626, or mail to: 44 Union Blvd., Suite 600, Lakewood, CO 80228

Position Listing Service

Do you have a vacancy to fill in your hospital or practice?

By listing your vacant position in the *Bulletin*, you'll reach more than 4,400 neurosurgeons across North America will be advised of it.

Quarter page ad costs $275 each. Call the AANS Marketing Department at (847) 692-9500 for more information, or fax or mail your descriptions to:

Floyd Brown
Sales Manager
AANS
22 South Washington Street
Park Ridge, Illinois 60068-4287
Fax: (847) 692-6770

Although the AANS believes these classified advertisements to be from reputable sources, the Association does not investigate offers and assumes no liability concerning them.

If you haven't visited NEUROSURGERY://ON-CALL® recently, here's what you've been missing:

- **Online Abstract Submission** for the AANS, CNS and Section Annual Meetings
- **Virtual Exhibit Hall**—Visit the Annual Meeting exhibitors before and after the Annual Meetings
- **Cyber Museum of Neurosurgery**—Explore the wealth of information and memorabilia offered by the neurosurgical archives in this online museum
- **Public Pages**—A great resource for your patients and for you! This section provides patient education material, an e-mail question and answer forum, interactive quizzes, and much more!
- **Find A Neurosurgeon**—A directory of AANS and CNS members that lets the public search online for a neurosurgeon in their community
- **Web Guide**—Looking for a neurosurgical related Web site? You're sure to find it here—this section contains links to over 500 Web sites
- **Jobs Database**—Post a job opportunity or search for openings in the CNS Placement Service online database
- ***Neurosurgical Focus***™—Access to a superb online journal that publishes topic oriented, peer-reviewed articles
- **Links to Medline**—A searchable database of over 9 million scientific journal abstracts

http://www.neurosurgery.org - Visit us today!

N://OC® is sponsored by
The American Association of Neurological Surgeons and Congress of Neurological Surgeons.
For information or assistance, please e-mail info@neurosurgery.org

Secretary's Letter

continued from page 24

Communications

The *Journal of Neurosurgery* continues to expect and deliver the very highest standards of scholarship available in neurosurgery. One of the most widely read neurosurgical journals in the world, the *Journal* provides neurosurgeons in all phases of their professional lives with the scientific and research knowledge needed to maintain a high quality practice. In 1997, the *Journal* began an aggressive campaign in Europe and Asia in order to maintain and increase readership worldwide, and their total number of new submissions reached a record-breaking 1,118. In addition, plans are underway to create a new spine journal which will join the *Journal* and *Neurosurgical Focus* as an official AANS publication

Another notable accomplishment this year has been the rising status of **NEUROSURGERY://ON-CALL® (N://OC®)**, which was recently selected as one of the top 250 sites for the 1997 American Society of Association Executives (ASAE) Foundation Study, World-Class Web Sites. John Oro, MD, has led his Editorial Board to create this cutting-edge Web site, praised by the ASAE as having "bold graphics, a well organized and designed side coupled with rich information content and a full compliment of value-added applications….Original content that is well documented along with extensive cross-references and links to other resources [which] give great depth to [this] site."

Although the *Journal of Neurosurgery*, *Neurosurgical Focus*™ and **NEUROSURGERY://ON-CALL® (N://OC®)** are exceptional marketing tools within the field of medicine, the AANS Public Relations Committee, led by Bruce Kaufman, MD, is steadily at work on several initiatives geared toward the public. This committee, among other things, will promote the AANS Annual Meeting, write news releases, handle media calls, staff booths at the American Academy of Family Physicians and the American College of Physicians Annual Meetings, develop standard patient education brochures, and compile a database of neurosurgical patient education materials. Of course, these efforts are crucial to our visibility on the local, state, and national fronts.

Neurosurgical visibility and patient information are at the heart of the AANS/CNS efforts to create the marketing communication campaign called "Getting Smart About Neurosurgery." Phase I of this campaign focused upon lumbar spinal stenosis and has been a huge success, with over 400 neurosurgeons purchasing the package consisting of two slide sets, physician referral brochures, and patient information brochures. Phase II of the campaign will target cerebrovascular disease and stroke and will once again provide neurosurgeons with a sophisticated approach to expanding their practice opportunities. These excellent marketing tools are available to all AANS/CNS members and represent the beginning of an important new method for making our services more accessible.

Socioeconomics

Keeping our visibility high and our voices unified during Medicare's ongoing assault on surgical specialists are more important than ever if we are to maintain reasonable reimbursement rates. As most of us know, the Health Care Financing Agency (HCFA) has proposed cuts in the practice expense portion of the Resource Based Relative Value Scale (RBRVS), the way neurosurgeons are reimbursed for treatment of Medicare patients. Once Medicare institutes such cuts, managed care companies are soon to follow, and the dominoes begin to fall.

Our Washington Committee, led by Arthur Day, MD, and Washington Office Director Katie Orrico, has had the challenging task of representing organized neurosurgery in the fight against actions which are not based on practice expense data at all, but rather are based on HCFA's desire simply to cut reimbursement rates. By testifying before Congress and leading the Surgical Specialty Coalition, Dr. Day and Ms. Orrico have refused to give in to cuts which could cost neurosurgeons millions, if not billions, of dollars in lost revenue. In addition, Robert Florin, MD, has developed a methodology for obtaining real neurosurgical practice data, so that any future changes in reimbursement will be based on actual numbers, not smoke and mirrors.

Medicare cuts aside, many other factors influence our socioeconomic status, one of which is our Current Procedural Terminology (CPT) Coding. In response, the Joint Officer's Task Force on CPT Coding has been charged with establishing a new infrastructure for CPT Coding within organized neurosurgery. The task force has set out to address issues such as reviewing existing CPT codes, educating neurosurgeons in proper CPT Coding, incorporating a dedicated staff person to the project, and establishing a contact point for all HCFA and AMA inquiries regarding neurosurgical CPT Coding. There is no doubt that Richard Roski, MD, and his task force will assist neurosurgeons immeasurably to clarify and navigate this complicated system.

Stan Pelofsky, MD
Secretary, AANS

Research foundation

Foundation Supported Researchers Provide Project Updates

By Robert G. Ojemann, MD

As of June 30, 1998, three research projects funded by the AANS Research Foundation were completed. On July 1, five new investigators started their funding period and three awardees entered their second year of research. For fifteen years, research in the neurosciences has been made possible through the contributions of the neurosurgical community and corporate sponsors.

We are pleased to report on the work of the researchers concluding their Foundation-funded projects.

1997 Young Clinician Investigator

E. Sander Connolly, Jr., MD
Columbia University
Chairman: Robert A. Solomon, MD
Sponsor: David J. Pinsky, MD

Research Title: *Leukocyte Adhesion Receptors and Thrombosis in the Pathogenesis of Evolving Stroke*

We examined the role that microvascular failure plays in the death of penumbral cerebral tissue subjected to focal ischemia and reperfusion. Specifically, our interest is in the role of the hypoxic endothelium, and its interaction with circulating blood cells (namely, lymphocytes and platelets), and the role this interaction has in inhibiting reflow. To date we have been able to demonstrate a functional role for ICAM-1, P-selectin and E-selectin in the pathogenesis of cerebrovascular no-reflow following reperfused stroke in both wild-type and transgenic knockout mice. Moreover, we developed phamacological strategies to improve outcome based on these findings. We also demonstrated a role for several circulating cytokines in the pathogenesis of no-reflow and demonstrated that procoagulant, complement-mediated processes may play an equally important and interrelated role. Strategies addressing these redundant mechanisms have been tested and appear highly efficacious.

1997 Shirley L. Bagan Young Clinician Investigator

Adam Mamelak, MD
California Institute of Technology
Chairman: William L. Caton, MD
Sponsors:: Scott E. Fraser, MD, and Erin M. Schuman, MD

Research Title: *Injury Induced Neuronal Reorganization in the Hippocampus*

We studied the process of neuronal reorganization that occurs following seizure-induced injury to the hippocampus, a process known as Mossy Fiber Sprouting (MFS). MFS may be an important model of epileptogenesis. We use time-lapse two photon laser scanning microscopy to study the dynamic aspects of this reorganization process in an in vitro hippocampal slice preparation. The time-lapse imaging demonstrates dynamic aspects of neuronal reorganization following injury. Early results are encouraging and suggest that the interaction between injury, cell death, cell birth, and synaptic reorganization is a highly dynamic process which can be altered by neuroprotective agents such as Na-Sal. Completion of experiments over the next 6-8 months will be needed to confirm these initial observations.

1995 Research Fellow

Frank Feigenbaum, MD
Georgetown University
Sponsor and Chairman:
Robert L. Martuza, MD

Research Title: *Transcriptional Targeting of Recombinant HSV for Treatment of Nestin Producing Brain Tumors*

This project involved the development of a recombinant Herpes Simplex Virus (HSV) whose cytotoxicity is limited to intentionally targeted tumor cell types. An HSV immediate-early (IE) gene essential for viral replication was first placed under the control of regulatory elements from the nestin gene, a gene shown to be upregulated in tumors of neuroectodermal origin. The ability of this construct to drive IE gene expression was then demonstrated in vitro. The construct was then introduced into the HSV-1 genome using homologous recombination. The tumor cell killing efficacy and safety of the recombinant virus are now being examined.

continued from page 34

ANNOUNCEMENTS

1999 RESEARCH FELLOWSHIP APPLICATIONS

The Research Fellowship, funded by the Research Foundation of The American Association of Neurological Surgeons, is designed to provide research training for neurosurgeons who are preparing for academic careers as clinician investigators. Applicants must be MDs who have been accepted in to, or who are in, an approved residency training program in neurological surgery in North America. The Fellowship is awarded for two years beginning July 1, 1999 at $35,000 per year. Deadline for application submission is December 4, 1997.

Applications will be available through the Internet on **NEUROSURGERY://ON-CALL®** (http://www.neurosurgery.org) by July 15, 1998. Applications will also be mailed to all Program Chairman in July 1998. If you would like additional information or would like an application mailed directly to you, please contact Chris Ann Philips, Grants Coordinator at 847-692-9500.

1999 YOUNG CLINICIAN INVESTIGATOR AWARD APPLICATIONS

The Research Foundation of The American Association of Neurological surgeons is accepting applications to grant support for young faculty who are pursuing careers as clinician investigators. Applicants must be neurosurgeons who are full-time faculty in North American teaching institutions and in the early years of their careers. The purpose of the Award is to fund pilot studies that could provide preliminary data that may be used to strengthen applications for more permanent funding from other sources. The Award of $40,000 will be provided for one year starting July 1, 1999. Deadline for application submission is December 5 1998.

Applications will be available through the Internet on **NEUROSURGERY://ON-CALL®** by July 15, 1998. Applications will also be mailed to all Program Chairman in July 1998. If you would like additional information or would like an application mailed directly to you, please contact Chris Ann Philips, Grants Coordinator at 847-692-9500.

1999 VAN WAGENEN FELLOWSHIP APPLICATIONS

In July 1998, The American Association of Neurological Surgeons will be accepting applications for the 1999 Van Wagenen Fellowship. The Fellowship is available to any neurosurgical resident in his/her last year of training who is a citizen of any North American country who intends to purse a career in neurological surgery. The Fellowship requires this continued training to take place outside of the North American continent for a period of not less than six months. Deadline for submission of applications is November 6, 1998.

Applications will be mailed to all neurosurgical residents whose residency training ends in 1999. For further information, please contact Chris Ann Philips, Grants Coordinator at 847-692-9500.

ANNUAL GIVING LEVELS

The Harvey Cushing Scholars Circle
(Gifts from Individuals)

Summa Cum Laude	$5,000 and up
Magna Cum Lauda	$1,500 to $4,999
Cum Laude	$1,000 to $2,499

Other Giving Levels

Honor Roll	$500 to $999
Sponsor	$250 to $499
Supporter	$100 to $249

Scientific Society
(Gifts from Groups and Organizations)

A gift of $1,000 or more that is received from an organization or group of doctors will be recognized within the Scientific Society category. Individuals will also be listed at their giving level.

Membership

summer '98

New Members Approved
Total Membership Reached 5,322

ACTIVE MEMBERS

Adnan Adib Abla
Paul Michael Arnold
Charles H. Bill, II
Basilio Fernandez Alvarado
J. Stuart Crutchfield
Joseph M. Koziol
Douglas W. Laske
Mark Robert Lee
Daniel James Miller
William G. Obana
Guillermo A. Pasarin
David Buenor Puplampu
Ashvin Ragoowansi
Christopher I. Shaffrey
Jon M. Silver
Stanley O. Skarli
Thomas N. Spagnolia
Thomas A. Staner
Shirley Irene Stiver
Richard C. Strauss
Richard M. Toselli
Micam W. Tullous
William C. Woodall, III
John L. Zinkel

ACTIVE PROVISIONAL

Matthew G. Ewend
Steven Adam Gilman
Brent Hirsch Greenwald
Robert Elkan Gross
Jack Jallo
Jeffrey David Jenkins
Richard W. Johnson
Kamal K. Kalia
Laverne Ray Lovell
Mark Andrew Lyerly
John Socrates Myseros
Anant Ishverlal Patel
Michael Gerald Radley
Nizam Razack
Ali R. Rezai
Jamshid Saleh
Marc S. Schwartz
Stephen Bradley Tatter

INTERNATIONAL ASSOCIATE

Abdul Rahman Hmoud Al-Anazi
Kazunori Arita
Kyung Keun Cho
Peter Julian Dohrmann
Michael Robert Fearnside
Gemma Garcia-Fructuoso
Seung-Chyul Hong
Kiyohrio Houkin
Iver A. Langmoen
Kiyoshi Matsumoto
Thomas Friedrich Gerhard Mindermann
Hiroshi Ryu
Suresh K. Sankhla
Shigeharu Suzuki
Mitsuhiro Tada
Jorg-Christian Tonn
Peter A. Winkler
Mustafa Ibrahim Ziyal

ASSOCIATE

Judith D. Diamond, CNOR
Colleen B. Dudffy, CNRN
George T. Gillies, PhD
Vickie L. Gordon, CNRN
Robert J. Huler, MD
Gerry A. Traylor, CNOR

CANDIDATE

Muwaffak M. Abdulhak
Mubarak Ali Abdullah Alaraij Al-Gahtany
Jose de Jesus Aleman Guzman
Brent Thomas Alford
Rafael Allende
Kurt D. Bangerter
Carter Edward Beck
Richard E. Clatterbuck
Jose Antonio Matheu Del Carmen
Jacques Demers
Praveen Deshmukh
Jill Wright Donaldson
Jaime Alejandro Flores Orozco
Wesley Caswell Fowler III
Saadi Ghatan
Abdi S. Ghodsi
Cuauhtemoc Gil-Ortiz Mejia
Alexandra Jacqueline Golby
Ryder Patten Gwinn
Mark Robert Harrigan
Odette Althea Harris
Jason Rayford Hubbard
Mario Izurieta-Ulloa
Babak S. Jahromi
Marcial Anaya Jara
Balraj Jhawar
Terrence Darryl Julien
Charles C. Kanos
Charles Kuntz IV
Michael Kenneth Landi
Juan Carlos Lara Giron
Peter Hoang Nguyen
Achilles K. Paparasiliou
Victor Lynn Perry
Sujit S. Prabhu
Michael Joseph Rauzzino
Laurence D. Rhines
Howard Anthony Riina
Jose Daniel Salvador Ruiz Gonzalez
Prakash Sampath
James Mark Schuster
David Andrew Steven
Sarel Jahannes Vorster
Scott Patrick Wachorst
Peter Jinnbin Yeh
Julie E. York
Gregory J. Zipfel

MOVING?

When moving remember to send your change of address to:

AANS Member Services
22 South Washington Street
Park Ridge, Illinois 60068-4287

Calendar

summer '98

Seventh National Neurotrauma Conference
August 21 – 23, 1998
Indore, India
91 731-491965/65252

Western Neurosurgical Society Annual Meeting
September 12 – 15, 1998
Napa, California
(619) 268-0562

International Society for Paediatric Neurosurgery and Neurosurgical Society of Australasia Annual Scientific Meetings
September 13 – 20, 1998
61- 3 –9682 0244

American Board of Medical Specialties
September 17, 1998
Chicago, Illinois
(847) 491-9091

Thirteenth Congress of the European Society for Stereotactic and Functional Neurosurgery
September 20 – 23, 1998
Freiburg, Germany
49-761-270-5063

The Japan Neurosurgical Society 57th Annual Meeting
October 14 – 16, 1998
Sapporo, Japan
81-11-716-1161

Biology of Neurologic Disease Meeting
October 18, 1998
Montreal, Quebec, Canada
(616) 545-6724

American Neurological Association
October 18 – 21, 1998
Montreal, Quebec, Canada
(612) 545-6284

American College of Surgeons Annual Meeting
October 25 - 30, 1998
Orlando, Florida
(312) 202-5000

North American Spine Society (NASS)
October 28 - 31, 1998
San Francisco, California
(847) 698-1630

American Academy of Neurological Surgery
November 3 – 8, 1998
Santa Barbara, California
(313) 936-5015

American Pain Society
November 3 - 9, 1998
San Diego, California
(847) 375-4715

American Heart Association Annual Meeting
November 8 - 11, 1998
Dallas, Texas
(214) 373-6300

Congress of the European Society for Pediatric Neurosurgery
November 12 – 15, 1998
Marseille, France
33-4-91-49-31-74

Society for Neuro-Oncology
November 13 - 15, 1998
San Francisco, California

The Japanese Society for Intravascular Neurosurgery – 14th Annual Meeting
November 19 – 20, 1998
Mito, Ibaraki, Japan
81-29-228-4713

AANS/CNS Pediatric Section Meeting
December 1 - 4, 1998
Indianapolis, Indiana
(847) 692-9500

Cervical Spine Research Society
December 3–5, 1998
Atlanta, Georgia

American Epilepsy Society
December 4–10, 1998
San Diego, California
(860) 586-7505

Neurosurgical Society of the Virginias Annual Meeting
January 14–16, 1999
The Homestead, Hot Springs, Virginia
(410) 646-0220

AANS/CNS CV Section
January 31—Febuary 3, 1999
Nashville, TN
(847) 692-9500

AANS/CNS Spine Section
Febuary 10–13
Lake Buena Vista, FL
(847) 692-9500

European Association of Neurosurgical Societies, Winter Meeting
February 13–16, 1999
Lublin-Warsaw, Poland
48-81-74-25-981

Fourth World Congress, International Stereotactic Radiosurgery Society
February 24–27, 1999
Sydney, Australia
61-2-9956-8333

American Society of Neuroimaging Annual Meeting
February 25-27, 1999
Scottsdale, Arizona
(612) 545-6291

AANS Annual Meeting
April 24–29, 1999
New Orleans, LA
(847) 692-9500

AANS/CNS Pain Section Satellite
April 22–23, 1999
New Orleans, LA
(847) 692-9500

1998 CNS Annual Meeting

October 3–8, 1998
Seattle, Washington
Information: Annual Meetings Service Department
(847) 692-9500