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The Voice for Organized Neurosurgery

Discussing the Expanding Role of the AANS.

For more than 35 years, the AANS has borne the responsibility of being the “spokesorganization” for organized neurosurgery—representing neurosurgeons at the local and national level. I would like to take this opportunity to outline the evolution of this role, the systems that we have put in place to ensure neurosurgical representation in every arena of concern and the implications of this activity to our membership.

Prior to 1965, there were five national neurosurgical organizations that provided educational fora for their members, as well as an opportunity for social discourse. There was no need for “representation” outside of participation in allied medical organizations such as the American Medical Association and American College of Surgeons, freely available to most members of each organization. However, the advent of Medicare in 1965 mandated that a single agency be identified to interact with Federal agencies in the development of neurosurgical components under the Medicare program.

Consequently, the Mayfield proclamation was issued in which the Harvey Cushing Society changed its name to the American Association of Neurological Surgeons (AANS), and thus became the voice of neurosurgery in this country. The “Cushing Society” was the logical base for this development since, by 1965, it represented the broadest spectrum of Board-certified neurosurgeons. A Mission and Structure Committee and a Bylaws Committee were formed with liaison representation from the American Board of Neurological Surgery (ABNS) and each of the other societies to develop the bylaws for this new organization. The AANS, which derived its authority as “spokesorganization” from its members’ participa-

tion in each of the five national neurosurgical organizations, has since served as a resource for governmental, private sector, educational and allied professional organization neurosurgical interactions.

Evolving to Serve You Better

The AANS has undergone a number of administrative reorganizations to better represent the varied needs of its membership. At its inception, the AANS Board of

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Directors was comprised of the officers of the Association and representatives from the other national societies. Over time, however, it was recognized that representation of the broad interests of neurosurgeons throughout the U.S. required restructuring of the Board constituency. Consequently, specific “societal” representation on the Board was abolished, and Board membership was restructured to represent all of neurosurgery.

We have continued to expand this representative base, which now includes Regional Directors from the Council of State Neurosurgical Societies, Section-nominated Directors, the Editor of NEUROSURGERY: //ON-CALL®, and the Chair of the Young Neurosurgeons Committee, in addition to our Directors-At-Large. We are all gratified by this new organizational structure and

believe that the decisions of our Board will adequately reflect the diverse interests and needs of our membership.

Expanding and Enhancing the Role of Young Neurosurgeons

The AANS recognizes the important role young neurosurgeons play within the Association and, as such, has reorganized its Membership Committee to include young neurosurgeons in leadership positions.

One of the missions of the committee is to define a system that ensures membership is representative and open to qualified neurosurgeons at every level of their professional careers. Active membership in the AANS remains limited to neurosurgeons certified by their respective Boards in the United States, Canada and the Republic of Mexico. However, the opportunity to become a Provisional member for those in training or pursuing Board certification has been expanded, with a simplified conversion process from Provisional status to Active status once Board certification is achieved. Given this, we eagerly seek to embrace residents and recent graduates not yet certified to participate in these options, which will provide input to the leadership, as well as introduce young neurosurgeons to a multitude of AANS membership benefits.

We, at the AANS Board, view young neurosurgeon representation as a critical element in our continued evolution as a representative organization. We recognize that we have the unique capacity to blend the enthusiasm and energy represented in our large cadre of younger members with the extensive practice experience, ABNS service and research and educational mentoring of our senior Board members. This combination assures that our future is bright as an association and a discipline. ■

NEWSLINE

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FROM THE HILL

COMMUNICATIONS AWARDS

Association Trends, the national weekly newspaper for association executives and suppliers, recently recognized two AANS neurosurgical communication projects in its 1999 Publications Contest. "Getting SMART About Neurosurgery—An Educational Program on Stroke" (jointly-sponsored by the CNS) won first place in the Promotional Item Category, and *Neurosurgical Focus™* (the online counterpart to the AANS *Journal of Neurosurgery*) won first place in the Online Journal Category. To view *Neurosurgical Focus™*, visit www.neurosurgery.org/focus/. To order the Getting SMART program, call (888) 566-AANS.

AANS INSERT IN USA TODAY

On April 7, 2000, AANS will publish an eight-page consumer educational insert in *USA Today* called *Neurosurgery Today*. This pioneering educational piece will provide an overview of the scope of neurosurgical practice for the lay public and other key audiences. It's estimated the insert will reach more than five million readers. For more information, contact the AANS at (888) 566-AANS.

- **AANS Files Lawsuit Against HCFA.** On December 30, 1999, the AANS joined several other medical specialty organizations in filing suit against the Health Care Financing Administration (HCFA). The suit challenges additional changes that HCFA made to the Medicare formula for calculating physician practice expenses. The AANS is contesting HCFA's decision to arbitrarily disallow expenses for clinical support personnel used in hospitals or ambulatory surgical facilities—in particular, the costs associated with employing clinical staff to assist with patient rounds, coordinate patient hospital stays, and assist with surgery and other related activities. While the financial impact from this change on neurosurgery is small, the AANS believes neurosurgery must continue to challenge HCFA's arbitrary actions at every level. The suit is pending review in U.S. District Court for the Northern District of Illinois.
- **AANS Joins AMA in Lawsuit Against HCFA Over Medicare Payments.** In December of 1999, the American Medical Association (AMA) filed a lawsuit against HCFA to recoup billions of dollars in physician Medicare revenue that has been, and may still be, lost due to faulty estimates in the sustainable growth rate (SGR) mechanism. The SGR is a spending target/growth rate used to update the physician conversion factor for the Medicare Fee Schedule. HCFA's faulty estimates meant that in 1998 and 1999, HCFA inappropriately withheld over \$3 billion from physicians. Unless HCFA makes the requested changes, physicians will be shortchanged \$1 billion each year thereafter. The AANS officially joined the suit as named plaintiffs in February.
- **Doctor's Bill of Rights Introduced in the House.** In November of 1999, the "Doctor's Bill of Rights Act of 1999" (HR 3300) was introduced by Representatives Shelley Berkley (D-NV) and Ernie Fletcher, MD (R-KY). The bill is intended to ensure that physicians who participate in the Medicare program are not subject to arbitrary application of fraud and abuse laws, and requires the government to focus on education rather than accusations. Specifically, the bill includes the following provisions:
 - Medicare carriers will be required to spend 3 percent of their funds to educate physicians on Medicare rules and regulations. The federal government fraud and abuse fund will be required to spend 10 percent of its funding on education initiatives.
 - Physicians will have the right to accurate information from Medicare carriers regarding billing discrepancies.
 - HCFA will be required to conduct pilot projects before implementing the new and complex Evaluation and Management Documentation Guidelines.

To view an AANS letter sent to Members of Congress urging them to co-sponsor the measure, visit www.neurosurgery.org/socioeco/.

- **NLRB Says Interns and Residents are "Employees."** Overturning more than 20 years of precedent, a divided National Labor Relations Board (NLRB) recently ruled that interns and residents at Boston Medical Center are employees, as well as students, and, therefore, are covered by the National Labor Relations Act (NLRA). As a result, more than 90,000 interns, residents, and fellows in private hospitals nationwide will have the protection of the NLRA, which means that they can unionize and collectively bargain the terms of their employment. The AANS is concerned about the implications of this ruling and believes that mechanisms, other than unionization, exist to assist resident physicians in negotiating such things as work hours and grievance procedures. In addition, the AANS is concerned that the employee designation may jeopardize Medicare funding for graduate medical education.

NEWSLINE

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JOB PLACEMENT ON N://OC®

The all-new Job Placement Service on N://OC® provides a free, searchable database of job opportunities to neurosurgeons and residents in training. Applicants can browse through a listing of available positions and sort by geographical region, practice type, size and area of specialization. Physicians may post their resumes. In turn, medical centers can peruse through those resumes, as well as post detailed information about available positions. To view this service, go to www.neurosurgery.org and select the "Job Placement Service" link on the Welcome Page.

AANS PUBLICATIONS CHANGES

In an effort to continue to grow and strengthen the AANS, the Association has been examining the cost-efficiency of several program areas. In particular, the AANS has examined its Publications Program—how it services members and what changes in content, marketing, order fulfillment and distribution are needed. As a result, the AANS will phase out its separate Publications Office in New Hampshire, effective June 2000, and hire a full-time Publications Manager to join the National Office staff. A detailed business plan for this area is under development and will be presented to the AANS Board for review.

NEURO NEWS

■ **\$2 Million Grant Awarded to FAME.** The Foundation for Advanced Medical Education (FAME), a division of the American Medical Foundation for Peer Review and Education (AMF), has been awarded a \$2 million grant from the Philadelphia Health Care Trust. The grant will be used to design a model program for teaching physicians on how to use new technology and procedures safely and effectively. The Foundation will work with the AANS, American College of Surgeons, American Association of Thoracic Surgeons/Society of Thoracic Surgeons, and the American Academy of Orthopaedic Surgeons to accomplish this goal. Martin H. Weiss, MD, AANS President, said, "We are very excited about the opportunity to study and improve the educational process itself. The grant will ultimately enhance our ability to provide state-of-the-art care to our patients. The grant also will provide the AANS with the resources to instruct neurosurgeons on new neurosurgical techniques, particularly in the area of lumbar interbody fusion."

■ **AANS Co-Develops a Position Paper on the Use of Bone Dowels From Human Tissue.** Prompted by growing concerns that the Food and Drug Administration (FDA) is moving to regulate bone products as medical devices rather than as human tissue, the AANS has co-sponsored a position paper regarding the proper classification of bone dowels. The paper provides background and other information regarding the safety and quality of human bone products, as well as other important considerations for classification and regulation. The position paper also served as the foundation for comments that the AANS jointly submitted to the FDA in December, in response to a proposed new tissue regulation published on September 30, 1999. According to the position paper:

- Use of human bone products (processed and pre-shaped) for spine surgery has a long history of documented safety and efficacy.
- Appropriate regulations for infectious disease testing, donor screening and record keeping already exist.
- The use of processed and pre-shaped bone products has been clinically proven to enhance patient care and improve outcomes.
- Any change in the classification of human bone dowels from its current status of tissues to that of a medical device would decrease the availability of these products to physicians and patients.
- The overall effect of any reclassification of these products from human tissues to medical devices could have dramatic and unpredictable implications on the utilization of all other human tissues, with a widespread negative impact on patient care.

To view the position paper, comment letter to the FDA, or a complete copy of the September 30 rule, visit www.neurosurgery.org/socioeco/.

■ **Online Help With Fraud and Abuse Compliance.** The American Medical Association (AMA) recently launched an online program to educate physicians and their staffs on how to confidently navigate America's highly regulated health industry. The Compliance Interactive Tutorial System (CITS), available to AMA members only, offers guided instruction on how to comply with laws, regulations and policy shifts that govern fraud and abuse enforcement activities. CITS periodically introduces training modules that provide a series of learning materials. The first module contains four lessons covering government audits, Medicare reviews, search warrants and subpoenas. Each lesson contains a subject matter scenario and a quiz designed to provide feedback for the user. Users may obtain information related to the lessons by choosing Internet links to other resources, such as HCFA advisories, compliance integrity agreements, government regulations, *JAMA* articles, news items, court cases, carrier statements and more. To access CITS, visit www.ama-assn.org/members/cits/index.htm.

Neurosurgical Workforce:

Examining the Physician Supply Controversy by A. John Popp, MD, FACS

How many neurosurgeons does the United States need? Are there too many or too few?

As the cost of medical care has escalated in the U.S., the socioeconomics of medicine has come under increasing scrutiny. In this environment, discussions on “right-sizing” the physician workforce in accordance with the needs of society have become pertinent. How many neurosurgeons does this country need? Are there too many or too few? Should the number of resident training programs be reduced? Answers to these questions are complex, but are illuminated by an evaluation of the supply-and-demand sides of the workforce equation and an understanding of the trends influencing workforce needs.

Neurosurgeons: Too Many or Too Few?

Currently, there is a perception by some that there are too many neurosurgeons to meet the needs of society. From the vantage point of a neurosurgeon, there are too many neurosurgeons if the number and type of operative procedures performed by that neurosurgeon are too few to maintain technical proficiency; or if the neurosurgeon is not sufficiently busy to derive professional satisfaction from his or her practice; or if third-party insurers can easily find neurosurgeons to provide services for an unacceptably low level of compensation, considering the neurosurgeon’s level and length of training.

Conversely, from the perspective of a patient residing in a sparsely populated state who must travel a long distance or wait an excessively long period of time for treatment, or of a hospital administrator unable to arrange neurosurgical emergency room coverage, there may appear to be too few neurosurgeons. Thus, from the perspective of both the specialty and the patients it serves, the question “Are there too many or too few neurosurgeons,” depends on who you ask.

Confounding the issue of workforce size are recommendations by national policy groups, based on an assumption of an abundance of physicians in the specialty workforce, that do not take into account such factors as regional needs, specialty differences, expanding treatment possibilities, growing subspecialization and individual choice.



Methodology for Workforce Analysis

Estimating the correct size of the neurosurgical workforce necessarily involves an evaluation of the supply of neurosurgeons and the demand for neurosurgical services. This evaluation can best be explained through the use of a workforce model that explores the dynamic between the supply of neurosurgeons and the demand/need for their services over time. Such a model is helpful in understanding the numerous influences on workforce needs, as well as in validating the complex backdrop against which workforce size must be evaluated now and in the future.

Factors Influencing Neurosurgeon Supply

Estimating the supply side of the neurosurgical workforce model is a complex task that requires one to calculate the total number of physicians available to provide clinical services. This calculation involves determining the efforts of a single, clinical full-time equivalent (FTE), the combined efforts of the physician pool, and the resultant total number of FTEs delivering service. A component of this computation is the clinical productivity of the FTE pool representing the percentage of time FTE neurosurgeons

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engage in patient care versus teaching, research, or administrative activities. In some non-neurosurgical workforce analyses, gender also has been shown to influence time spent in clinical activities. Fiscal considerations, such as falling salaries and decreasing clinical loads, and the distribution of neurosurgeons throughout the U.S. also are modulating factors used in calculating the clinical productivity of the neurosurgical workforce.

The changing size and distribution of the neurosurgical workforce (i.e., newly-trained neurosurgeons entering and others leaving the workforce) must also be taken into account if a reasonable model of the neurosurgical supply is to be developed. Factors influencing rate of increase include the number of residents in training in the U.S. and the number emigrating from other countries, particularly Canada. In the future, these numbers may be influenced by such forces as government regulation of either the size of training programs or the number of surgeons emigrating to this country. The numbers involved in training may also be influenced by policies adopted by the specialty of neurosurgery that might reduce or increase the number of residency programs. Perceptual influences due to falling salaries or reduced job opportunities may, as well, influence supply by lessening medical students' interest in the specialty.

Conversely, the size of the workforce pool is impacted by the rate of attrition attributable to death, decreased volume of clinical practice, or job changes from clinical practice to administration. Finances are a factor too, as some older neurosurgeons in the managed care environment find that, with reduction of salaries, it is no longer desirable or economically feasible to continue practicing.

Thus, estimating the actual number of FTE neurosurgeons providing services now and in the future is a challenge. However, even more daunting are the complex economic and societal variables that must be considered when estimating the demand/need for neurosurgical services.

Factors Influencing Neurosurgeon Demand

The demand/need side of the equation evaluates the pool of patients who require neurosurgical services. The current size of this pool is determined by the types of disorders for which neurosurgeons presently provide care. Disease prevalence, the range of neurosurgical services offered, market share, physician distribution and the ability for patients to pay for services are among the other factors that modulate the size of the patient pool. Furthermore, the size of this pool may increase or decrease according to fluctuations in disease prevalence, or the amount of service provided by neurosurgeons as compared to that provided by physicians in other specialties.

Other significant influences on the demand for neurosurgeons include the availability of and access to insurance that pays for neurosurgical services, as well as the ever-growing population of elderly and uninsured individuals in need of medical services. Recent

data suggests that prolonged primary care treatment of some diseases is more expensive in the long term than earlier referral for specialty care, thereby indicating that an adjustment in the definition of need may be necessary when it comes to access to specialty care.

Counterbalancing the increasing need for specialty care, however, are mitigating factors such as the trend to use less costly allied health professionals (i.e., physician's assistants, and nurse practitioners) to deliver some of the outpatient care traditionally provided by neurosurgeons.

In the final analysis of the model, the ideal relationship between supply and demand should result in a balanced equation, with just the right number of neurosurgeons to deliver the neurosurgical care needed by society. However, such a balance is difficult to achieve given the numerous variables and changing circumstances involved.

"The primary care physician's value has risen, while the specialist has been devalued—viewed as an expense to be avoided by MCO's."

Trends Influencing the Debate

Given the relatively small size of the specialty, it may seem somewhat surprising that neurosurgery has been a prominent focus in the current national debate surrounding "right-sizing" the physician workforce. Its position of prominence is likely attributable to some recent estimates of workforce need that show neurosurgery at or near the top of the list of overpopulated medical specialties. To understand this phenomenon, it may be helpful to examine some of the current economic and medical trends in the

U.S. that have a bearing on the issue of neurosurgical workforce.

■ **Managed Care.** In the '90s, managed care was hailed as the solution for health care cost containment in the U.S. The decline in the fee-for-service mode of health care delivery, accompanying the rise of health maintenance organizations as the coverage of choice, brought free market and corporate economic incentives to what was once a supplier-dominated industry. Patient choice and physician-to-physician referrals have become less significant, as cost containment has become the driving force in medical care. As a result, the primary care physician's value has risen, while the specialist has been devalued—viewed as an expense to be avoided by managed care organizations. Most analyses show that this need for neurosurgical care in a managed care setting is far less than the current national density of one FTE neurosurgeon per 55,000 population.

■ **Growth in Neurosurgical Workforce.** The number of neurosurgeons in training has steadily increased over the past several decades. According to German et al., in 1952 there were 94 approved institutions for neurosurgical training, with a total of 241 trainees

in all years of training. By 1998, that number grew to 94 neurosurgical training programs, with a total of 818 residents.

Despite this growth in the size of training programs over the past 40 years, the American Board of Neurological Surgery has continued to certify an average of only 113 new neurosurgeons annually (1975-1999). The total number of Board-certified neurosurgeons in the U.S. has remained approximately 3,500 for the past decade.

■ **International Medical Graduates (IMGs).** The training of IMGs is often cited as a source of surplus. Indeed, the growth in the total number of IMGs has been dramatic, accounting for approximately 20 percent of all residents in training in the U.S. However, the number of IMGs concluding a successful match in neurosurgery has changed little over the past decade. Considering the small number in neurosurgical training programs, IMG's impact on workforce strategy in the near future will be minimal.

There are philosophical issues concerning IMGs, however, that should be addressed by the neurosurgical community, including 1) should training slots be based on merit, regardless of an applicant's country of origin; and 2) should IMGs be required to return to their country of origin once training is complete? Such issues, if not addressed, will continue to impact the percentage of IMG residents in training, even in a small specialty like neurosurgery.

■ **Scope of Neurosurgical Practice.** The scope of neurosurgical practice is defined by the breadth of training provided and the development of new science, technology, treatments and techniques. It is inevitable, with the advances occurring in medicine, that neurosurgery's scope of practice will conflict with other specialties. In this regard, spine care, carotid endarterectomy and peripheral nerve surgery either represent areas of opportunity or lost market share for the specialty of neurosurgery.

■ **Role of Allied Health Professionals.** The increasing role of allied health professionals in delivering patient care traditionally provided by physicians appears to be attributable partly to economic factors and partly to the willingness of physicians and patients to allow care to be rendered by allied health professionals. Although such care can increase the efficiency of a neurosurgeon, the use of allied health professionals in an outpatient setting or in a managed care environment could, in theory, decrease the need for trained neurosurgeons.

■ **Government's Role in Workforce Policy.** The federal and state governments have had a long-term interest in physician workforce issues. From implementing programs in the 1960s to increase the number of applicants enrolling in medical schools to subsidizing graduate medical education directly and indirectly through Medicare supplementary payments, and from developing Medicare's resource-based relative value scale to budget-driven reductions in reimbursements for GME, the government has had a profound influence on the size of the physician workforce.

■ **National Policy Groups.** Concern about physician workforce has led to recommendations by several national policy groups, including the Institute of Medicine, the Council on Graduate Medical

Education, the PEW Commission and several professional medical associations, to reduce the number of resident positions available, while maintaining funds for graduate medical education programs and monitoring physician workforce. Although these recommendations draw attention

to the topic and may influence future government policy, none have had a direct bearing on the specialty of neurosurgery at this time and some of these workforce estimates have been flagrantly inaccurate.

■ **Local Initiatives.** Health care initiatives also are occurring at the state level. For example, the Health Care Financing Administration's initiative to pay New York State hospitals \$400 million over six years was conceived as a solution to physician excess. It was created in an effort to assist teaching hospitals in redesigning their graduate medical education programs, while at the same time providing a vehicle of funding during a period of transition. Whether such programs will impact neurosurgical residency programs and, hence, the size of the neurosurgical workforce is still being examined.

■ **Initiatives of Neurosurgical Organizations.** Many practitioners have questioned how "organized" neurosurgery can affect the workforce in a positive way. The American Board of Neurological Surgery and Residency Review Committee for Neurological Surgery have been a positive influence in preserving the quality of residency training programs. Their continuing efforts to develop and maintain policies that assure the educational quality of the training programs have enhanced the ability of those in training to be a successful part of the neurosurgical workforce.

Likewise, the AANS has enhanced the neurosurgical environment through its ongoing commitment to education and professional development—important facets of improving neurosurgeons' position as competitive providers of health care.

Strategies for the Future

Despite the complexity of workforce issues and the difficulty in determining the best course of action, neurosurgeons must take an active part in the workforce dialogue. They must become galvanized in their efforts to maintain their scope of practice. They must fight to ensure that residency programs maintain their standards and prepare trainees for the challenges of the current medical environment. More important, neurosurgeons must speak with one voice. They must support the role of the AANS and the role of the Washington Committee, which serves as a voice for neurosurgery at the federal level. By taking these steps, neurosurgery, not policymakers or the marketplace, will have an active role in guiding workforce decisions. ■



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The Manpower Debate

Too Many Neurosurgeons?

SIDNEY TOLCHIN, MD, FACS

MANY of our colleagues are convinced that there is an oversupply of physicians in our specialty. As health care becomes more managed, they fear that this situation could lead to underemployment and a resulting lack of clinical experience for some members of the neurosurgical community. They consider this to be a serious situation and a significant threat to our specialty.

Scope of the Problem

If a neurosurgeon is to be identified solely as a brain surgeon, then there are too many neurosurgeons in the United States. Conversely, if neurosurgeons are to carry out every component of their comprehensive medical and surgical training, there are not enough. Clearly, the scope of this debate is complex and can only be addressed when one considers the impact of neurosurgical or other specialty competition, tertiary care facilities and managed care.

In a 13-year study conducted by A. John Popp, MD, FACS, on workforce demand, he noted that, based on the number of advertisements for neurosurgical positions, there is no evidence that supports an overabundance of neurosurgeons. Undefined is whether these ads are based on need, desire for increased referrals or relief from emergency room duties.

Ask any training director and you will learn that every trainee completing that program has obtained a position in an academic or private setting. Review the 1992 or 1995 Comprehensive Neurosurgical Practice Surveys and you will find that neurosurgery enjoys an advantaged income position (although states affected most severely by managed care are currently evaluating income since that time). Why, then, this persistent, nagging question? What generates this perception that there are too many neurosurgeons? Is it based upon frustration in not being able to accomplish all that one was trained to do, insecurity about maintenance of expertise, anxiety about income or concerns about community needs?

Identifying the Problem

Having had the opportunity to review many practices throughout the country in varied positions of practice assessment and peer review, including my prior Chairmanship of the American Board of Neurological Surgery's Professional Practice Committee, I have noted a colleague accomplishing 400 surgical procedures a year not

being able to pay bills, another performing 65 procedures a year, including 20 carpal tunnel releases, and still another "trying to design a neurosurgical procedure around every patient" he sees. If you were to ask these individuals if there is an adequate supply of neurosurgeons, their unequivocal answer would be that there are too many neurosurgeons. This causes one to question, "Are 125

major surgical procedures a year enough? Should a neurosurgeon performing five aneurysm surgeries per year or two pituitary operations a year continue this practice in order to fulfill every component of training?"

If a neurosurgeon is capable of carrying out skull base surgery, why should he or she not be capable of clipping a single aneurysm a year or removing a pituitary adenoma every two years? Especially if there are no outcome studies? In a group, a neurosurgeon who is offered a position ostensibly confined to spinal instrumentation is expected to take call and perform aneurysm and pediatric surgery at night and on weekends.

Solving the Problem

There is a real difference between senior residency surgical data and later practice data. There must be some evaluation of the service needs of a training program vis-a-vis societal needs for neurosurgical expertise. Responsibility falls upon Program Directors to inform bright third-year medical students seeking continued training in neurosurgery there is no guarantee that, following six or seven years of the most enjoyable and intensive immersion in neurosurgery, there will be a long line of patients waiting for application of those developed skills in brain tumor removal or aneurysm clipping.

Rather, those remarkable individuals should be aware that they might be seeking boutique neurosurgery in niches such as pain management, industrial medicine, stereotaxis, epilepsy surgery or require enfolded or fellowship training in specialized areas of pediatrics, spine, cerebrovascular or skull base surgery to achieve their professional or financial goals.

Outcome studies must define competency and the importance of the number of procedures performed. Outcome studies must also define the ultimate status of residents completing training programs, not in the year following completion but five or ten years thereafter. Outcome studies must assist in determining the need for subspecialization or centralization of neurosurgical care. Until that data is available, this quest for a satisfactory answer to neurosurgical workforce needs cannot be put to rest. ■

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The Manpower Debate

Too Few Neurosurgeons?

DAVID L. KELLY, JR., MD

ARE neurosurgeons in short supply? Yes, and I say so with some confidence. Although we do not have a national physician manpower study, much less a neurosurgery manpower study, we can identify trends that will be inextricably linked to the shortage of neurosurgeons in our country. They include:

- Neurosurgery is a highly technical and rapidly evolving specialty and, thus, is becoming more specialized and requiring more practitioners. This subspecialization, in itself, demands more research and offers increasing opportunities, therefore requiring more manpower.
- The intrusion by and subsequent competition with other medical specialties, including orthopaedic surgery, cardiology, radiology, plastic surgery and vascular surgery is directly related to the lack of availability and commitment by neurosurgery (i.e. manpower).
- The current marketplace dictates that there is an undersupply of neurosurgeons. Well-trained residents have multiple job opportunities in desirable practices and the number of academic positions, I sense, is increasing as many programs are actively recruiting faculty.
- There is a maldistribution of neurosurgeons, with excess numbers in metropolitan areas and inadequate numbers in numerous rural areas of the country, particularly in the Midwest.

Points of Consideration

One's impression of the neurosurgery manpower situation is directly related to expectations of what neurosurgery should be in the future, and what neurosurgeons should be doing. If neurosurgeons are to do what they have done in the past, relying on a standard set of operative procedures to tackle major neurosurgical problems, then currently we have adequate manpower. However, if one believes, as I do, that we have not only an opportunity but a responsibility to develop our field to the fullest, maximize our opportunities in both basic and clinical research, and participate in the development of new technologies, then we clearly do not have enough manpower.

From that standpoint, we should do what is in the best long-term interest of the public and our specialty, and not what is necessarily in the best interest of the individual neurosurgeon.



Clearly, the public and our specialty will best be served by the major efforts in both basic and clinical research, the continued development of technology for the treatment of neurological illnesses, and the applications of those advances at a national level.

We, as neurosurgeons, are the only ones who can develop our specialty to the fullest, and must make it our goal and our responsibility. We must not be passive, but actively organized as enlightened practitioners, academicians and leaders in expanding our specialty, controlling our destiny and serving society through our patients.

Quality Manpower

Neurosurgeons should never separate the issues of manpower from the issues of quality. For without quality, our specialty would be destroyed. The most critical factor to maintaining quality is attracting new, talented students to our field. To continually attract students, we must create an advanced, exciting environment where residents are encouraged to participate. More important, we must support the

American Board of Neurological Surgery and Residency Review Committee for Neurological Surgery to continue to promote the incorporation of new knowledge and technologies into our training programs, as they have so wisely done to date.

In addition, we must continue to push for neurosurgical workforce studies. Manpower studies to date have been flawed because they have addressed public needs rather than wants. Such flaws need to be addressed, as our patients will want and expect more in the future.

Recognizing this, I suggest that organized neurosurgery take the following steps toward ending the workforce debate:

- Appropriately study the issues of neurosurgery manpower.
- Continue to expand the field of neurosurgery with research and trainees.
- Demonstrate that neurosurgeons are, without peer, leaders in the management of disorders of the brain, spine, nervous system and peripheral nerves.
- Continue to deliver the highest quality in our education and in our program certification.
- Avoid a fundamental error in underestimating our manpower needs and opportunities in the future, which would be a critical mistake for our specialty. ■

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Adjusted Needs?

Modeling the Specialty Physician Workforce.

In 1933, the Committee on the Costs of Medical Care (CCMC) published its historic treatise, “The Fundamentals of Good Medical Care.” It was a bold effort to describe the dimensions of the physician workforce in precise, quantitative terms. However, for reasons that are inexplicable, this model, a creature of the 1920s, came to dominate physician workforce planning for the rest of the 20th century.

The CCMC was chaired by Henry Moore, Secretary of the Interior, and it included a distinguished interdisciplinary panel. Over the preceding five years, it had issued 27 reports covering various aspects of health care services. However, “Fundamentals” was its major report, and (at \$2.50) its most expensive.

The thesis underlying the CCMC’s approach was drawn from Olin West, MD, Secretary of the American Medical Association and member of the CCMC. Dr. West identified the outstanding problem confronting medicine as “the delivery of adequate, scientific medical service to all the people,” a statement that bears relevance today. Seizing upon this statement, the CCMC undertook to define “adequate” by applying the principles of science.

Basic Tools for Workforce Analysis

The CCMC began its study by systematically cataloguing the host of conditions and disorders that physicians must be concerned with. Focusing on “adequate,” it limited its scope to “the essential services,” since “medical care is a medical and not an economic concept” (a point that grossly underestimated the impact that the economy would have in the future). It then applied the principles of science to this process by quantitating the prevalence of disease, determining the exact number of

physician encounters required for each and designating the time (in minutes) for each encounter. The CCMC’s unique and enduring contribution was to establish two basic tools for workforce analysis: reconstructing the system from its component parts and measuring the parts using the “metric of time.”

Applying these tools, the CCMC concluded that, in the aggregate, good medical care in 1929 required exactly 283,131 hours of physician time. Assuming that each

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physician devoted 40 hours per week, 50 weeks per year to these tasks, “less than the present heroic working schedule,” the system would need 140.5 physicians per 100,000 of population, a figure that was 10 percent greater than the existing supply. Moreover, it concluded that 18 percent of these physicians should be specialists in one of the 10 specialties then recognized. This exhaustive exercise was presented in 302 pages of text and tables, but it included a warning that, if the reader “expects to find here the finality of judgment and precision of detail, he is doomed to disappointment.” And doomed we have been.

GME Model of Workforce

Almost 50 years later, another creature of government, the Graduate Medical Education National Advisory Committee

(GMENAC), reached into the past for a model that it could use to determine the number of physicians that were required in each of the specialties. While retaining the CCMC’s core methodologic tools, it modified the approach of the CCMC to create its “Adjusted Needs Model.”

Like the CCMC’s earlier model, GMENAC’s was based on “dissecting the intricacies of the pluralistic health care system” from an epidemiologic perspective. It studied the prevalence of disease and used expert panels to build a consensus regarding the proportion of individuals with each disease who need treatment, the time required for that treatment and the number of physicians necessary to provide that time.

As was evident in the CCMC’s model, GMENAC’s dependence on disaggregating and reconstituting the universe of care, coupled with its need to assign the metric of time to both the elements of care and the effort of physicians in providing it, seriously handicapped its ability to determine what actually was occurring. However, GMENAC went one step further. Failing to heed the advice of the CCMC that “it is impossible to determine, once and for all time, the services that will represent an adequate application of medical knowledge and skills to the needs of the people,” GMENAC proceeded to extrapolate its calculations 20 years into the future, predicting that there would be a 30 percent surplus of physicians in the year 2000. Although this prediction proved to be excessive, it has had a strong influence on health policy discussions.

COGME’s Approach to Workforce

With the increasing availability of data on clinical practice in the early 1990s, GMENAC’s successor, the Council on Graduate Medical Education (COGME), adopted the Demand-Utilization Model for workforce planning. Rather than relying on epidemiologic data, this model assessed the requirements for physicians based on actu-

Continued on next page

al measurements of services provided. For this, it drew upon the resources of national databases, such as the National Ambulatory Medical Care Survey, the National Hospital Discharge Survey and Medicare claims data. However, like its predecessors, the Demand-Utilization Model attempted to recreate physicians from their component tasks and to standardize them by applying the metric of time. Not surprisingly, it, too, failed. For example, only four years ago, COGME projected that there would be a 47 percent surplus of specialists in the year 2000.

As managed care emerged, a new avenue of analysis, the requirements model, appeared. It was based on physician utilization in staff/group model HMOs. These seemingly "closed systems" should, it was reasoned, be able to account for all of the care provided and all of the time nec-

year 2000, a prediction that led to a call for the closure of 20 U.S. medical schools, a sharp decrease in specialty training and the curtailment of funding for international medical graduates.

Thus, beginning with the CCMC's report in 1933 and continuing through GMENAC's report in 1980 to COGME's various reports in the 1990s, physician workforce studies have been dominated by a linear, mathematical mode of thinking based on dissecting and reconstituting the health care system and standardizing its components according to the metric of time. The imprecision in this process is legion, and the errors associated with applying it to a multiplicity of diseases, an array of services and a diversity of both patients and physicians are enormous. Using it to project future needs further compounds the error. Moreover, it does so

plexity and diversity. It projects future demand by using a process of trend analysis. However, rather than using the metric of time, it employs a statistical approach, assigning a vector, magnitude and probability to each of the trends considered.

The dominant trend is the economy. Even in 1933, the CCMC recognized that "compelling economic forces" influence the distribution of physicians and that "the practice of medicine depends upon the consumers of medical services as much as on the practitioners of medicine." These economic forces are even stronger today. But other trends also are important, such as technology, demographics, physician productivity and the changing roles of nonphysician clinicians. Moreover, these trends are complex and interdependent, and most are influenced by the underlying economic dynamics.

Building from current realities, the Trend Model is constructed in a manner that is deterministic and objective. It also allows the introduction of value judgments concerning issues such as costs, access and training. However, by compartmentalizing such judgments, it frees the basic analysis from bias and permits the juxtaposition of alternative formulas for future workforce needs.

"Physician workforce studies have been dominated by a linear, mathematical mode of thinking based on dissecting and reconstituting the health care system and standardizing its components according to the metric of time."

essary for physicians to provide it. Moreover, by applying the metric of time, all of this could be expressed as full-time equivalent (FTE) physicians.

However, the HMOs from which this model was built represent a small and shrinking segment of clinical practice, and the assumptions and extrapolations required to describe the entire system from this narrow pedestal are complicated and tenuous. As a result, the conclusions have been far from the mark. In what was characterized as "the most complete forecast to date," carried out on behalf of COGME in 1994, Weiner predicted that 65 percent of all specialists (165,000 physicians) would be in excess supply by the

in ways that are not always apparent in the final product.

This has been the American way for seven decades. Is there an alternative?

New and Improved: The Trend Model

Over the past year, I have had the great pleasure of working with an expert panel comprised of representatives from the Council of Medical Specialty Societies (CMSS) to consider how to best conduct studies of the specialty workforce. The deliberations of this panel recently concluded by endorsing an alternative model that I call the "Trend Model." This model does not dissect and reconstitute the current system but, rather, accepts its com-

Looking to the Future

Attempts to analyze the physician workforce reveal how imperfect the science is. It must accommodate to inconsistencies and ambiguities in existing data and uncertainties about the future. Approximations of that future, however, are needed to guide the important training decisions of today. I believe that it's time to move beyond the workforce models of the 1920s and to adopt contemporary approaches that reflect the complexities of modern health care. The Trend Model could fill that need. But, as a wise sage observed, "prediction is very difficult, especially when it involves the future." ■

The Value of Research

Recognizing the Importance of Neurosurgical Research Training.

By JULIAN T. HOFF, MD, AND SANJAY GUPTA, MD

At various times in the history of neurosurgery, the value of research and research training has been challenged. Perhaps at no time in history, however, is this challenge more important. The Balanced Budget Act of 1997 (BBA) has made significant changes to the Medicare program, including Medicare payments by billions of dollars. As a result, the average teaching hospital is projected to lose \$45.8 million in Medicare payments between 1998 and 2002. Included in the BBA's changes to Medicare provider payments are reductions in Graduate Medical Education, which reimburses teaching hospitals for training physicians.

Only two years into its five-year implementation, the BBA's damaging impact is causing an immediate financial crisis at teaching hospitals—access that threatens the educational mission of neurosurgical programs. Left unchecked, the BBA's Medicare cuts will force the nation's teaching hospitals to reduce the scope and promotion of their research efforts. Several bills granting BBA relief to teaching hospitals have been introduced in Congress. In particular, the "Graduate Medical Education Payment Restoration Act of 1999," recently passed in Congress, slows the BBA's implementation of cuts associated with the residency training and research period.

Research in Neurosurgery Training Programs

In late 1998, the Research Committee of the Society of Neurological Surgeons conducted a Program Directors Survey, focusing on research in training programs. All 95 neurosurgical Program Directors responded. According to the survey results, the average program has seven neurosurgeons providing patient care, with 2.7 of those faculty members doing laboratory research and 2.6 conducting clinical research supported by outside funds.

The survey also revealed that the average program has 1.5 residents per year, is 66 months in length and dedicates 14 months to research. Nearly 75 percent of the Program Directors surveyed indicated that all training programs should require research in their curriculum. Funding and mentoring were regarded as the principal barrier to a productive research experience.

Presently, less than half of the programs receive research support from the National Institutes of Health (NIH), 25 percent receive support from non-NIH governmental sources, and most receive some financial support for research from industry sponsors. Direct financial support from all extramural sources for research in U.S. neurosurgery training programs was \$78 million in 1998.

Value of Research

Neurosurgery is a fiercely independent discipline, where neurosurgeons are required to think objectively, diagnose accurately,



choose treatments appropriately, evaluate outcomes honestly and, most important, stay abreast of current treatments. As we train neurosurgeons of the future, the value of research with exposure to the scientific method becomes clear. Well-designed and well-executed clinical and experimental investigations are

crucial to the advancement of our specialty.

As our lively field continues to be fueled by an explosion of technological advancements, scientific principles rather than expert opinion and authority derived from tradition, will direct clinical practice. These principles will ensure that our field remains vital and meaningful while our students are instilled with a sense of curiosity and thoughtfulness.

Value of Neurosurgeons

Clinical neurosurgeons are, in many ways, best aligned to enhance and direct the future of research. Without the expertise of clinicians, vexing problems such as brain tumors, spinal cord trauma, cerebral vasospasm and dystrophic abnormalities lack a clinical context. Certainly after caring for patients, neurosurgeons are best qualified to perform the colossal task of defining and honing the current uncertainties in neurosurgery. Neurosurgeons are, and must continue to be, invaluable members of research teams as they formulate questions, help find answers and employ these answers to the task of caring for patients.

Looking Ahead

As the field of neurosurgery moves into the new millennium, it is important to respect our past and contemplate our future. After all, neurosurgery was founded on a commitment to research and training in the scientific method. These covenants must be cherished and secured. As our educational system evolves, it must not only foster the growth of neurosurgeons in adequate numbers and exceptional competence, but also support men and women capable of creating and shaping the future of neurosurgery. Dedicated time for research will ensure this continuous growth and progress. ■

Julian T. Hoff, MD, Professor and Head of the Department of Neurosurgery at the University of Michigan (Ann Arbor) and Chair of the AANS Neurosurgery Research and Education Foundation, and Sanjay Gupta, MD, Chief Resident in the Department of Neurosurgery at the University of Michigan, contributed to this article.

High Tech, High Costs

Part Two: Examining Technology and Health Care Reform.

BY ROBERT E. HARBAUGH, MD, FACS

In the first article in this AANS Bulletin series on technology and the future of neurosurgery ("High Tech, High Costs," Vol. 8, No. 4), I made the case that the introduction of new technology has been the driving force of increasing medical care costs throughout the developed world. Consequently, such steady increases have resulted in various plans for controlling health care expenditures. This article explores how such proposals might impact the development and deployment of new technology.

United States Health Care and New Technology: Recent History

Over the last 50 years, the structure of the U.S. health care system has been conducive to developing and deploying new technology. Most of us have practiced in an era of employer and government subsidized health insurance with fee-for-service reimbursement. This structure of entitlements, subsidies and payment policies has had a profound effect on research and development efforts.

For example, health care expenditures were directed toward hospitals where specialists—dependent on expensive, sophisticated technology—performed acute, curative interventions. Innovation in surgical procedures was particularly favored, since new procedures were less regulated than drugs and devices, and reimbursement for operative procedures was generally higher than for non-procedure related care. Because our society places such a high value on new technology, individuals and organizations could best compete in this system by offering the latest technology, regardless of cost.

In addition, this system produced dramatic medical advances. It spurred the development of new technology and made the U.S. the primary site for commercialization of new health care technology developed abroad. It also resulted in the proliferation of expensive equipment and facilities and produced the most costly health care in the world.

Health Care Reform Proposals

In the early 1990s, high health care costs and concerns from the business community and federal officials about their willingness and ability to pay for them created a crisis atmosphere for health care reform. The public debate on reform has continued, focusing on the issues of access and cost.

Access was generally defined as some kind of universal entitlement to basic health care services. The U.S. system was widely criticized for the number of uninsured citizens. Costs were discussed in absolute terms, as a percentage of the gross domestic product (GDP) and in regard to the rate of increase. The U.S. was clearly an outlier in relation to absolute costs and costs as a percentage of GDP.

However, as the first article in this series pointed out, the rate

of increase of U.S. health care costs was similar to that in other developed countries, but this important piece of information was largely ignored. Various proposals for reducing absolute health care costs, limiting the rate of increase of health care expenditures and improving access to health care were proposed. These proposals can be grouped into three basic strategies that will each influence the development and deployment of new technology in neurosurgery.

1) Single Payer Plans. Single payer plans envision consolidating health insurance coverage into a public system administered by the federal government or by the states with federal oversight. Proposals

"Implementation of a single payer plan would have the most profound impact on technological developments."

ensure universal coverage for a standard package of benefits that would be financed through broad-based taxes with little or no patient cost sharing. A federal agency or national health care board would be charged with determining the benefit package, as well as the national health care budget. Payment for care would likely be determined prospectively, with fee schedules for individual physicians, global budgets for hospitals and capitation payments to comprehensive care organizations.

Single payer plans would promote primary care by increasing payment rates for services in relation to procedures, and by offering incentives for expanded training to primary care physicians.

2) Managed Competition Plans. These plans call for the federal government to create incentives for a more competitive environment that would make consumers, employers, insurers and health care providers more aware of cost. Such plans would be required to offer a standard benefit package and to report outcomes and indicators of "quality." No one could be denied coverage based on health care status. The advocates of such plans think that competition in this environment would force insurers and health care providers to develop integrated delivery systems and provide more cost-effective care. The most discussed managed competition plan was the Clinton Health Security Act. This plan would have limited Medicare and Medicaid spending and, when fully implemented, would have restricted private insurance plan premiums as well. Managed competition plans also contain incentives to increase the proportion of primary care physicians.

3) Insurance Market Reforms. With the failure of the Clinton plan, reform efforts focused on a more incremental approach to improve access and control costs within the existing health care delivery system. Incentives to create voluntary purchasing pools for individuals and small businesses, to limit the discretion of insurers to deny coverage and to assure continued coverage with a change in employers have been advocated. The use of medical savings accounts to purchase health insurance for catastrophic illnesses with high deductibles for routine care also was proposed. These insurance market reforms do not restrict private health care spending and have the least emphasis on promoting primary care, as opposed to specialty care.

Effects of Health Care Reform

We have seen many changes in the way we practice due to Medicare health care reform and the adoption of these reforms by private insurers. Increased constraints on spending for hospital treatment has encouraged a shift to ambulatory care facilities. Increased coverage and reimbursement rates for preventive services and primary care have occurred. This, and other incentives, is inducing more medical students to consider training in primary care. Government, employers and insurers are assessing the cost-effectiveness of care and making such information available to the public. Clearly, it is becoming more difficult to compete effectively in the medical marketplace simply by offering the latest technology.

■ **Access and Cost.** For years, the debate on health care reform has focused on access and cost. Technology entrepreneurs will have expanded markets if universal health insurance brings more people into the system and increases the use of medical services.

Conversely, potential developers of new technology may be reluctant to invest in research and development if they fear that cost containment will limit their ability to profit from new products or procedures. The impact of health care reform on new technology needs to be a high-priority concern when evaluating these proposals. The three types of health care reform plans discussed above are likely to influence new technology development in different ways.

■ **Insurance Market Reforms and New Technology.** Insurance market reform proposals would promote increased awareness of cost, but these plans are likely to have the least impact on technology development. They do not cap private insurance spending and do relatively little to change the present environment in which effective competition among providers, hospitals and insurance plans requires the purchase and use of the latest technology.

■ **Managed Competition and New Technology.** Managed competition plans also are designed to increase the cost consciousness of consumers and employers. They would, however, have a more profound influence on technology development. All of the proposed managed competition plans include incentives to increase resources for primary care.

Technological innovation has been linked to medical specialty care for more than 50 years. Specialists in the academic medical cen-

ter environment have played a dominant role in developing and advocating the use of new medical technology. A shift of emphasis toward primary and preventive care and away from acute, curative, specialized care will almost certainly influence the pace and direction of technology development.

Moreover, many managed competition reform proposals also include measures to restrict new technology by regionalizing care. For example, the Health Security Act would have required all insurance plans to contract with academic health centers for certain specialized procedures. This would limit the market for expensive health care equipment and the profits that health technology entrepreneurs could hope to achieve.

Another aspect of proposed managed competition plans is outcomes evaluation and quality assurance, which has the potential to impact new surgical equipment and procedures. Innovations in surgical care and new surgical technology have often become widely disseminated without evaluation of their efficacy or cost. Under managed competition proposals, the pace of technology development would be slowed by the necessity to document the cost-effectiveness of new technology.

■ **Single Payer Plans and New Technology.** Implementation of a single payer plan would have the most profound impact on technological developments. Unlike managed competition plans, single payer plans would place a stronger emphasis on primary care, regionalized care and cost-effectiveness reporting.

In addition, the government would regulate benefits covered and capital investment. Global spending caps, limitations on ownership of technological facilities, strict regionalization of specialty care, and fee limitations would profoundly influence the practice environment. Competition for patients by offering the latest technological advances would no longer be possible for most physicians and hospitals. The U.S. would no longer be the unquestioned market of choice for developing and deploying new technology. Technology dependent surgical specialties like neurosurgery would be most affected.

Looking to the Future

Health care reform continues to be debated and will likely become a very hot topic in the 2000 presidential race. Momentum is building for another attempt at a major overhaul of the U.S. health care system. All of the proposed reforms are likely to impact the development and application of new technologies in neurosurgery. Recognizing this, it is essential that neurosurgeons understand the implications of these reform proposals on their present practice and the future of neurosurgery. ■

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EMTALA Update

OIG Steps Up Enforcement and Targets Physicians.

The Emergency Medical Treatment and Active Labor Act (EMTALA: 42 U.S.C. sections 1395cc, 1395dd and OBRA amendments of 1989 and 1991) is riddled with requirements that can be a minefield to navigate. According to data from the September 27, 1999 issue of *Physician Compliance Alert* and the Office of the Inspector General (OIG), EMTALA statutes, which are supposed to target hospitals, are now increasingly targeting physicians and the fines are greater than those in the past. In fact, 15 cases have been settled with physicians, 13 of which occurred in the last four years. To reduce the chance of running afoul of government investigators, neurosurgeons must be made aware of the following risks.

Areas of Risk

1) Medical screening examination. Physicians must provide an appropriate medical screening examination for any patient entering a hospital emergency department (ED) who requests an examination or treatment for a medical condition. This examination also includes ancillary services available to the ED, as well as the specialists on call. This also embraces managed care patients whose health plan may or may not authorize ED visits.

According to a recent *Special Advisory Bulletin on the Patient Anti-Dumping Statute* (64 Fed Reg. 61353) "Once a managed care enrollee comes to a hospital that offers emergency services, the hospital must provide the services required under the anti-dumping statute without regard for the patient's insurance status or any prior authorization requirement of such insurance." Data from the *Physician Compliance Alert* indicates that the most common violators are ED doctors seeking prior autho-

rization from managed care plans before treating patients, and on-call doctors who fail to show when called in for emergencies.

2) Stabilizing treatment for emergency medical conditions and labor. If an emergency medical condition exists, further medical examination and treatment must be provided to stabilize the patient before transferring. According to the statute, stabilizing with respect to an emergency medical condition means "a medical condition manifesting itself by acute symptoms of sufficient severity (including severe pain) such that the absence of immediate medical attention could reasonably be expected to result in placing the health of the individual in serious jeopardy, serious impairment of bodily function, or serious dysfunction of any bodily organ or part." Physicians are cleared of responsibility if they obtain written consent from a patient refusing further treatment or requesting a transfer.

3) Restricting transfer until a patient is stabilized. If a patient has a medical condition that has not been stabilized, physicians cannot order a transfer unless certain criteria are fulfilled. Such criteria include: a) the patient must be informed as to the risks of transfer. If the patient elects to transfer anyway, written authorization from the patient must be obtained; b) the physician, based on the information available, must certify in writing the risks and benefits of transfer; and c) if a transfer is warranted, the transfer must be to an appropriate medical facility.

OIG Disallows Certain Terms

The November 10, 1999 *Special Advisory Bulletin* further outlines provider EMTALA responsibilities to managed care patients. According to the *Advisory*, hospitals and treating physicians cannot delay screening or stabilizing treatment due to managed care

pre-authorization contract obligations. Furthermore, no pre-authorization can be sought until screening is complete and stabilization treatment is started. Additional OIG interpretations:

- A hospital may not delay screening or stabilizing treatment to prepare an advanced beneficiary notice.
- Patients inquiring about medical costs must be told that the hospital will provide emergency screening and stabilizing services, regardless of their finances.
- Despite indicating a desire to leave a facility, the hospital and its physicians must offer treatment and inform patients of its necessity and the risks of leaving without receiving care. If a patient still wishes to leave, a written waiver should be secured.

EMTALA Expansion Expected

Recently, the OIG broadened its interpretation of EMTALA to include patients who are unstable and in a hospital. Thus, if a neurosurgeon discharges a patient admitted to the hospital in an unstable condition, he or she could be violating EMTALA. Regulations defining that position have yet to be published, but all neurosurgeons should remain alert for these regulatory changes.

Another regulatory interpretation that goes into effect in early 2000 will be broader EMTALA definitions of what constitutes an emergency department. All hospital property, including "the entire main hospital campus, the parking lot, sidewalk and driveway, as well as any other facility or organization that is located off the main hospital campus but has been determined...to be a department of the hospital" will be included. With this in mind, neurosurgeons should seriously consider EMTALA compliance plans for their practices. With fines up to \$50,000 and/or expulsion from the Medicare program, you can't afford to ignore EMTALA. ■

John A. Kusske, MD, former Chair of the AANS Managed Care Advisory Committee, and Cherie L. McNett, Senior Manager of Regulatory Affairs for the AANS/CNS Washington Office, contributed to this report.

Practice Costs

Preparing for the Challenges of the 21st Century.

If you haven't noticed yet, the costs in your practice are becoming a key factor in your continued profitability. With continued cuts in reimbursement by almost all managed care plans, including Medicare, and the disappearance of balanced billing, your ability to cost shift from the remaining contracts that pay more than your expenses is shrinking. This pressure on your margin and your income is being felt acutely in some markets, especially those with high managed care penetration and high competition for patients.

Scope of the Problem

To deal with this problem, you need to be in-tune with your practice's operating expenses. Unfortunately, most practices are still using a gluteal approach to judging their costs by comparing their income on an annual basis to previous years. Since everyone knows how hard they are working, some estimates of cost can be made from this approach.

A more accurate way to estimate costs is to use your annual accounting report summary to compare your costs with those of other surgeons. Such reports are published in Medical Group Management Association's (MGMA) annual reports, *Medical Economics* magazine, or the annual AMA Socioeconomic Monitoring Survey Report.

The most useful way, however, is to develop the data within your practice that allows for calculation of the actual expense of providing specific services, even at the level of individual procedures. This requires that a standard measure of professional services be used to quantify your work product. This measure is codified as relative value units (RVUs) in the resource based relative value scale (RBRVS), which is now used by the majority of payers for

health services. When the total RVUs produced in your practice are calculated from your billing system, the actual expense per RVU can be calculated using the total expense data divided by the total RVUs. Armed with this dollars-per-RVU-figure, you can determine your practice's actual expenses by multiplying the RVUs for any procedure by this factor.

When this method is applied in a practice, the practice administrator can realistically analyze fee schedules and managed care contracts for their actual impact. Cost management techniques based on real data can also be employed to contain costs while preserving the quality of services. Other applications include defining floor capitation rates, allocating capitation payments among a group of providers and third-party profitability analysis.

Practical Data

For those not yet convinced that cost management may be important to your practice, some information from the AANS Survey on Practice Expenses may provide you with practical examples of this type of data. The survey now includes data from 54 neurosurgical practices, including 246 neurosurgeons and 34 other physicians within those practices, and represents a modest mix of states, and practice sizes—both private and academic. The survey includes a

case mix database, which represents a one-year accumulation of all procedures and services billed by CPT code, both with and without CPT modifiers. Moreover, the survey provides the raw frequency data needed to calculate the total work product of the practice for the year, by multiplying the RVUs for each billed code by the listed frequency for that code. This calculation, therefore, offers a measure of the expense per RVU that may match the output of different practice billing systems.

For example, if your computer uses only the total RVUs per CPT code in the billing process, the expense per RVU that would match that system would be the dollars per total RVU when calculating expense per CPT code. An example using the survey data to calculate the current practice expense payment by Medicare is as follows:

$$\begin{aligned}\$ \text{ per work RVU} &= \$39.08 \\ \$ \text{ per total RVU} &= \$19.44\end{aligned}$$

Finally, a thorough understanding of practice expenses will enable you to more accurately evaluate fee schedules. For example, payments from Medicare for your practice expenses are consistently below actual cost. The table below lists five frequent neurosurgical procedures, and compares the actual practice expenses to the amount Medicare paid in 1999.

Clearly, the shortfall is alarming when the realization of what is happening to your business expenses is exposed. ■

Robert E. Florin, MD, is a semi-retired private practice neurosurgeon in Whittier, California. He is a 37-year member of the AANS and the Chair of the AANS Physician Reimbursement Committee, consultant to the AANS/CNS Washington Committee and a member of the AANS/CNS Cost Containment Task Force.

Actual Practice Expenses Versus Medicare Expense Payment — 1999

1999 CPT	PROCEDURE	ACTUAL PRACTICE EXPENSE	1999 MEDICARE PRACTICE EXPENSE PAYMENT	% DIFFERENCE FROM ACTUAL EXPENSES
35301	Carotid Endarterectomy	\$731	\$494	-32%
61510	Brain Tumor Excision	\$1,112	\$919	-17%
61700	Carotid Aneurysm	\$1,974	\$1,150	-42%
63030	Lumbar Discectomy	\$469	\$453	-3%
63047	Lumbar Spinal Decompression	\$571	\$548	-4%

Intraoperative Microdissection

When to use the 69990 Modifier.

Several changes occurred in the neurosurgical codes for CPT 1999, including a new intraoperative microscopy code—69990. Previously, there were several ways to code for the utilization of an intraoperative microscope, including 61712, as well as the -20 modifier. Both of these options have been eliminated and replaced by 69990, which describes the use of the intraoperative microscope in the performance of microsurgery.

This code is valued for the work required in performing microdissection. The operative note should include the reason that microdissection was required for managing the problem. A specific description of the microdissection performed should also be made in the body of the operative note. The code was not intended to describe using the microscope for illumination or magnification alone, but rather for the work of microdissection. Consequently, this code should not be used for use of loupe magnification.

When to use a Modifier

Since this code is an “add-on code,” it should not be appended with the -51 multiple procedure modifier. This code is valued only for intraoperative work and is

QUICK ANSWERS TO YOUR CODING QUESTIONS

The AANS coding hotline provides members with convenient access to coding advice at discounted rates. The hotline is staffed by Physician Reimbursement Systems, Inc., a long-time provider of similar services to a number of medical specialty societies. Members may call (800) 972-9298 with any type of coding question, claim denial or regulation issue. Have your AANS member number and credit card ready when you call. The hotline's hours of operation are Monday–Friday, 7 a.m.–4:30 p.m. (MST).

never used alone. Therefore, one would not expect an additional reduction by the multiple procedure rule. The code may be used once for an operative procedure. Medicare does not reimburse 69990 with the -80 modifier for an assistant surgeon.

CPT lists a series of codes in which the microdissection is an integral component of the work. In the neurosurgical section, procedures that include valuation of microdissection are transsphenoidal hypophysectomy (61548), anterior cervical or thoracic discectomy and osteophylectomy (63075-63078), and internal neurolysis (64727). Although lumbar discectomy (63030) was not specifically excluded, Medicare has not paid for microdissection in lumbar discectomy in the past, and it has been suggested that procedures not previously paid with the 61712 or -20 modifier will not be paid with 69990.

As with other codes, the relative value units (RVU) for microdissection have been gradually declining over the last few years. In 1998, the relative value for 61712 was 8.26 RVU. With the change to 69990 in 1999, the value was reduced to 6.02 units. Concurrent reduction in the conversion factor further accentuated the impact of the reduced value. Although the decline to 5.95 units for 2000 was minor, an increase in the conversion factor was concurrently instituted.

For More Information

The American Medical Association publishes *CPT Assistant*, which discusses in greater detail the interpretation and appropriate use of CPT codes. Last year, the April issue described the use of 69990. ■

Gregory J. Przybylski, MD, is Assistant Professor of Neurosurgery at Thomas Jefferson Medical College and a faculty member for the AANS Reimbursement courses.

The coding procedures expressed in this article should not be construed as AANS policy, procedure or standard of care. The AANS disclaims any liability or responsibility for the consequences of any actions taken in reliance on the coding procedures suggested.

2000 AANS Procedural Statistics Collection

This year, AANS will focus part of its communication efforts on the compilation of a neurosurgical procedures statistical report. AANS is frequently called upon by the media, third-party payers, vendor companies, various committees developing public and physician education programs and our members to provide neurosurgical statistics. The new project will provide invaluable data that will be used to bring better focus to AANS public outreach, education, research programs and fundraising activities. The project will involve compilation of common neurosurgical procedures including nervous system/spine procedures, nervous system/cranial procedures, and topics such as average surgeon fees.

In the months ahead, approximately 1,500 Active and Active Provisional members will receive a questionnaire asking for their annual operative figures, including the number of patients being treated in each procedural category. It is important that member participation in the survey be as complete as possible to ensure an adequate sample upon which to build a final report.

International Outreach

The Role of the AANS in a Shrinking World.

Globalization has changed not only the world economy, but also the world of neurosurgery. A look at the AANS Annual Meeting Scientific Programs of recent years reveals the increasing participation of neurosurgeons from other continents, some of whom have trained in North America, but many of whom have not. Complementing the globalization of our meeting, our Active membership, which always included Canadians, has expanded to include neurosurgeons from Mexico. This expansion has positioned the AANS as the dominant organization for neurosurgery in North America.

International Membership

The AANS has traditionally had categories of membership for distinguished foreign neurosurgeons, namely the Honorary and International Associate membership categories. The latter category was restricted by the Bylaws to those "proposed and chosen because of their national and international recognition..." This requirement left no room for those neurosurgeons in pursuit of "international" recognition.

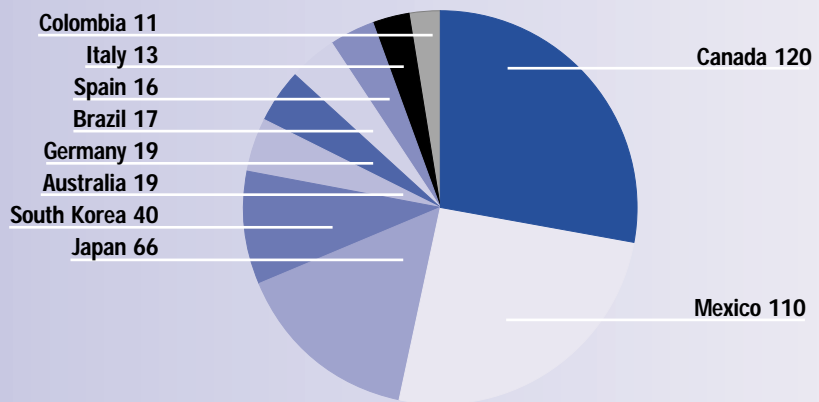
The level of interest in becoming an AANS member among neurosurgeons from abroad is increasing. At present, we have 594 members from 61 countries out-

side of the United States (see chart). This is largely due to the educational value of our Annual Meeting, but also to the other benefits of AANS membership, including our publications, specialty Sections, and educational courses. The recent growth in

review process in their country, who give proof of good professional standing, and who hold an unrestricted license to practice medicine in their country." (To review the proposed Bylaw changes, see page 36.)

Furthermore, an applicant for International Associate membership must, according to the proposed Bylaws, "...be proposed in writing by an International Associate or Active (Foreign) member and confirmed in writing by three AANS members, at least one of whom shall be an AANS Active, Active (Foreign), or Interna-

AANS Members Outside the U.S.



Top 10 countries outside of the U.S. with the highest concentration of AANS members.

membership among our international contingency fits nicely with the AANS' strategic plan to raise the quality of neurosurgical practice not only in North America, but throughout the world. To achieve this goal, and as a leadership society in the field, the AANS must remain an association of inclusion.

Change in Membership Status

In an effort to embrace international neurosurgeons, the AANS membership has before it proposed Bylaws that would broaden the International Associate category to include "neurological surgeons who are certified or recognized by the peer

tional Associate member from the applicant's country, or an individual of international stature in that country or geographic region. The proposal shall be submitted to the Adjunct Subcommittee on International Associate Membership at least 30 days prior to the Subcommittee's meeting, at which the proposal will be considered, and must be accompanied by a curriculum vitae written in English."

Enacting these proposed Bylaws will be good for the AANS, as well as for neurosurgeons around the globe. ■

Russel H. Patterson, Jr., MD, FACS, is Chair of the AANS Adjunct Subcommittee on International Associate Membership and Past President of the AANS.

COMMITMENT TO INTERNATIONAL MEMBERS

In recognition of the growth of international members in the AANS, the Bulletin will now feature a column devoted to the interests of neurosurgeons overseas. In addition, the Bulletin will expand its mailing to all International Associate members, effective with this issue.

Graduate Medical Education

Congress Considers Reform Proposals.

Financial support for graduate medical education (GME) continues to be a hot topic among policy makers.

Widespread concern among Members of Congress that federal GME financing is overly generous and does not promote the appropriate distribution of physician manpower has been the driving force behind efforts to revise the GME funding mechanism. Physician groups like the AANS, Association of American Medical Colleges (AAMC) and others point to the unique social goals fulfilled by academic medical centers as justification for continued federal financing of GME. These social goals include technology diffusion, clinical research, indigent care and improved quality of care through the residency training experience.

How GME Financing Works

The Medicare program, which plays a central role in providing financial support for the nation's GME system and teaching hospitals, spends approximately \$6.5 billion on GME each year. Under the current system, GME support is divided into two components: direct medical education (DME) payments and indirect medical education (IME) payments. DME payments are intended to cover stipends to residents, supervisory personnel, and other associated hospital costs for supporting a residency program. These are payments for each individual, full-time equivalent resident. Full payment is made for residents in their "initial residency period," which is either the minimum period required for Board eligibility or five years, whichever is less. After the initial residency period, subject to a few exceptions, the payment is reduced. DME payments are approximately \$2.2 billion annually.

The IME component is not based on any specifically identified direct costs. Rather, it is intended as general support for teaching hospitals and to compensate for the higher costs that these hospitals incur from uncompensated care, greater severity of illness, more sophisticated technology, etc. IME payments are made through an adjustment to each teaching hospital's Medicare diagnosis-related

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group (DRG) payment, and are roughly \$4.3 billion annually.

In 1997, Congress capped the number of residents that Medicare will support according to the number of residents in place as of December 31, 1996, thus limiting the growth of DME. Congress also reduced the IME adjustment, thus resulting in lower payments to teaching hospitals.

GME Reform Proposals

Responding to congressional directives, several influential policy bodies have put forward different GME reform proposals. Each recognizes a continued obligation by the federal government to subsidize residency training, but would accomplish this goal through different mechanisms:

■ **National Bipartisan Commission on the Future of Medicare.** Created by the Balanced Budget Act of 1997 (BBA 97), the National Bipartisan Commission on the Future of Medicare was charged with

examining the structure of the Medicare program and GME financing policies, and making recommendations for reform. Although the Commission failed to reach consensus and make any final recommendations, Senator Bill Frist, MD, (R-TN), a thoracic surgeon, developed a number of options for future consideration:

1) **Establish a Separate Mandatory GME Trust Fund.** Each year, using current Medicare formulas, the appropriate amount of money would be transferred from the Medicare trust funds to the GME trust fund. In addition, general revenues could be appropriated to the trust fund. A variation on this would be to phase-out the transfer of Medicare funds to the GME trust fund, after which all funds would be appropriated through the annual federal budget process.

2) **Establish an All-Payer GME Trust Fund.** Medicare funds would be transferred to the GME Trust Fund and a new fee would be levied on all other health care payers. Federal support for GME would likely remain at the same levels, in which case the Medicare share would be reduced.

3) **Carve-out GME From Medicare and Establish a Discretionary GME Program.** All GME funding by Medicare would be eliminated. A discretionary program would be set up and funded through the annual appropriations process (similar to most non-entitlement government programs).

The Frist proposal also included an option for establishing a voucher system for DME funding that could operate under any of the above systems. In this system, DME funds would follow the trainee to the training site(s) he or she selected.

■ **Medicare Payment Advisory Commission.** The BBA 97 also required the Medicare Payment Advisory Commission (MedPAC) to review and make recommendations to Congress on GME, teaching hospital payments and federal health care workforce issues. In August 1999, MedPAC issued its report "Rethinking Medicare's Payment Policies for Graduate Medical Education and Teaching Hospitals." The

MedPAC recommendations differ vastly from the Frist proposals, calling into question the entire rationale of the federal government's GME policy and financing structure. The Commission believes that funding for GME should be targeted to account for the increased costs teaching hospitals face due to the enhanced value of their services, and that Medicare reimbursement to teaching hospitals for costs associated with training is an "accounting artifact." Thus, the Commission recommended combining the separate DME and IME payments into a single payment adjustment to the DRG system to account for higher patient care costs. Specific recommendations to Congress are:

1) Medicare should pay more for patient care in teaching settings when the enhanced value of that care justifies the cost.

2) Congress and the Secretary of Health and Human Services (HHS) should improve the DRGs to reflect the relationship between illness severity and the cost of inpatient care, thereby making Medicare payments more consistent with efficient providers' costs.

3) Congress should revise Medicare's payments to recognize the value of patient care services provided in teaching hospitals through an enhanced patient care adjustment.

4) Congress should phase-in the payment adjustment for enhanced patient care and any related policies that substantially change payments to individual providers.

5) Congress and the Secretary of HHS should develop payment adjustments for enhanced patient care in all settings where residents and other health care professionals train, when the added value of patient care justifies a higher cost.

6) Federal policies intended to impact the number, specialty mix, and geographic distribution of health care professionals should be implemented through targeted programs, rather than Medicare.

■ **The Pew Commission.** This commission has a long history of weighing-in on health care policy matters and has issued a

"Each proposal faces its own set of obstacles and opponents, thus limiting the chances for reform."

series of reports related to physician manpower and GME support. Its most recent report, "Strengthening Federal GME Policy," contains a number of recommendations to federal policymakers (most of which are a restatement of its past position). The Pew Commission believes current physician workforce trends indicate a need to reform federal GME policy to better align it with market trends and public interest. Therefore, Medicare's GME financing must be tied to the nation's workforce requirements (i.e. dramatically reducing the number of specialist residency positions, while maintaining the number of generalist residency positions). The report makes seven key recommendations:

1) An all-payer GME trust fund should be established and financed via an assessment on health plans and contributions from Medicare and other federal programs that subsidize GME.

2) Funded residency positions should not exceed 110 percent of the number of U.S. medical graduates in 1997.

3) Guarantee all-payer reimbursement for U.S. medical graduates who pass appropriate licensure examinations and are admitted to an accredited residency program. Eliminate GME payments for IMG residents who are citizens of other nations.

4) Establish a uniform per resident payment formula to eliminate regional variation, other than cost-of-living adjustments.

5) Require teaching institutions to offer the same number, or more, of generalist residency positions as were available at these institutions in 1997.

6) Create a separate mechanism for payment of IME that is independent of payments for inpatient hospital services.

7) Establish a new commission to track

health care workforce trends and advise federal policy makers on health profession workforce policies and GME financing.

AANS' Response

Given the complexity and political nature of this debate, and due to the fact this is an election year, it is highly unlikely that any major GME reform legislation will be enacted into law in 2000. Each proposal faces its own set of obstacles and opponents, thus limiting the chances for reform. Senator Frist's proposal to subject GME financing to the annual discretionary spending budget process has been severely criticized because of the instability it could bring to both academic medical centers and residents. The MedPAC proposal has been condemned by many in organized medicine as unworkable and an abdication of the federal government's responsibility for supporting GME. Finally, recommendations like those of the Pew Commission are viewed by many as too socially liberal and will not likely advance in a Republican-controlled Congress.

The AANS shares the aforementioned concerns, and will be formulating an official position to enable weigh-in with policy makers as the debate unfolds.

Clearly, the future of specialty medicine will be impacted by any changes to the GME and federal workforce policies. To that end, you must continue to monitor and participate in this debate. ■

For information on the AANS' position on GME and physician manpower, or the "Quality in Graduate Medical Education Act," visit www.neurosurgery.org/socioeco/.

Spotlight on the CSNS

Exploring the Role of Neurosurgery's Socioeconomic Arm.

Within the AANS, the organizational activity perhaps least familiar to the average member is the political and socioeconomic arm of the body of neurosurgery. For most members, the important benefits of a national professional society are educational meetings and publications, contact with technical and equipment vendors, casual and professional social contacts, and exposure to new and changing ideas and techniques—and the people who have them. Less obvious, but no less influential in everyday practice, are the laws and regulations governing medical practice; federal program and budget policies; and the economic, professional, and business environment in which practice is embedded. These issues are the focus of neurosurgery's socioeconomic arm, the Council of State Neurosurgical Societies (CSNS).

The CSNS is the socioeconomic and political interface between the AANS and CNS and their individual members, through representatives chosen at the state level. The CSNS is a delegate assembly jointly sponsored and funded by the AANS and CNS, which meets twice a year as a formal assembly and conducts business on socioeconomic issues.

History of the CSNS

In 1986, the CSNS grew out of the Joint Socioeconomic Committee (JSEC) of the AANS and CNS, expanding a single committee to a delegate assembly with seven subsidiary committees and over 100 elected or appointed delegates. The delegate assembly structure allowed expanded input from neurosurgeons from all geographic regions and types of practice, as well as a means for reaching a democratic consensus on policies or initiatives that

impact members' practices. The CSNS has become a two-way thoroughfare. It gives members with ideas access to fellow members and national organizations to implement their ideas, and it gives organized neurosurgery a forum for communicating their current policies and socioeconomic initiatives with grassroots members.

The CSNS draws membership from each state neurosurgical organization,

James R. Bean, MD, a private practice neurosurgeon in Kentucky, is Past-Chair of the CSNS and Associate Editor of the AANS Bulletin.



based on a representation ratio of one delegate per 50 neurosurgeons registered in the state society. Delegates are elected by the state society for three-year terms. The membership basis allows wide and proportional geographic representation, bringing an array of interests and experiences to bear on the debate and decisions made by the assembly. Additionally, representatives appointed by the AANS and CNS, constituting no more than one-third of the total assembly, bring the perspective of each parent organization to the debate, balancing the regional state influence and adding special expertise as the need arises.

Organizational Structure

The CSNS is divided into four quadrants for purposes of regional representation and geographic caucuses. Each quadrant meets as a group at each CSNS meeting to discuss and compare regional, political and practice

events over the prior six months, and again at a separate session to caucus over resolutions before the CSNS and discuss how the quadrant wants to support, oppose, or amend the resolutions.

Regional representation on the AANS Board of Directors as the voice of everyday neurosurgical practice was a volatile issue in the mid-1980s, when the CSNS was developed. In response, four Regional Director AANS Board positions were created, mirroring the four regional CSNS quadrants. The Director from each quadrant is elected every third year by the quadrant members, creating between the CSNS and the AANS Board a bond that transcends mere committee-governing body relationships. Furthermore, close ties are maintained between the CSNS and both the AANS Board and the CNS Executive Committee by appointment of the CSNS Chairman as a liaison or ex-officio member of both bodies.

The CSNS underwent a fundamental restructuring of its resolution process five years ago, bringing it out of a labyrinth of often confused debate and a morass of frequently ineffective decisions. The change was a stage in the growth of the Council, as it learned from past errors. Three key elements made the transformation profoundly effective: 1) required submission of resolutions prior to the assembly meeting (no spontaneous, impulsive motions), 2) a tripartite resolution process, using first a reference committee hearing, second a caucus meeting to review reference committee recommendations, and finally a formally structured parliamentary debate and vote, and 3) involvement of the parent organizations in the deliberation process. The result in eliminating ill-considered or unworkable resolutions and in improving the quality, effectiveness and consensus of adopted resolutions was nothing short of astonishing.

Organizational Actions

By its resolutions and reports, the CSNS has had a substantial and growing impact on

both sponsoring organizations and their political policy arm, the Washington Committee. A number of initiatives over the past five years began in the CSNS and found their way into organizational action.

The fellowship accreditation concept grew out of a resolution passed in 1996. It was followed by several surveys documenting resident demand for fellowships, and wound its way through the AANS, CNS, American Board of Neurological Surgery, Residency Review Committee, and currently to the Senior Society, where implementation of fellowship accreditation seems most likely to occur.

Marketing initiatives have surfaced repeatedly in the CSNS over the past decade, resulting in the Getting SMART programs on Lumbar Spinal Stenosis and Stroke. The programs were created in an effort to raise the tide of public awareness of the problems neurosurgeons deal with, whether in spinal disease, stroke, or other conditions, and increase referrals for all neurosurgeons, either by improving recognition of the problem or encouraging appropriate referral of the patient.

The CSNS Workforce Committee has labored for years over studies on the number of neurosurgeons, how many are needed, and how many are being trained. Several publications analyzing neurosurgical workforce supply and estimating future demand have grown out of committee studies in the past five years. Its most recent report, reviewing a series of surveys over a five-year span, exposes a relative undersupply of neurosurgeons caused by a virtual explosion of technical neurosurgical capabilities and patient demand for specialized services.

A new CSNS Neurotrauma Committee was formally created this year, after several years of ad hoc activity researching the socioeconomic aspects of trauma care. The committee has created liaison relationships with the AANS/CNS Section on Neurotrauma and Critical Care, bringing consideration of legal and reimbursement issues alongside more typical

"The Director from each quadrant is elected every third year by the quadrant members, creating between the CSNS and the AANS Board a bond that transcends mere committee-governing body relationships."

scientific and practice experience information.

Expanding Role of the CSNS

The CSNS has taken on an increased role in socioeconomic educational responsibilities. Four years ago, a series of seven videotapes were created as basic educational sources on a variety of socioeconomic topics, including medicolegal, managed care, and practice management. Subsequently, the CSNS has taken on several new educational responsibilities. It now arranges a one-and-a-half-hour socioeconomic symposium at the Plenary Session of the AANS Annual Meeting that features a nationally recognized speaker, coordinates an afternoon Socioeconomic Section Session for submitted abstracts at the CNS, and organizes an AANS Breakfast Seminar on practical practice management strategies.

It also serves as a resource for articles for the *AANS Bulletin*, with its new socioeconomic format, and fulfills an Associate Editor's responsibility for the new publication *CNS Neurosurgery News*. A new CSNS standing committee, the Communications and Education Committee, was created last year to meet these responsibilities.

Several years ago, the CSNS found itself with committee projects to research, but lacking funds to do so. The CSNS voted to create a voluntary state assessment of \$250 per delegate per year to establish a fund for the Council's discretionary use outside of normal operating expenses. The response from states has been encouraging, but not universal. Out of those funds, the CSNS now

finances committee research projects, shares the costs of the AANS Socioeconomic Symposium speaker, and supports two new awards for the best resident and best young neurosurgeon socioeconomic topic presentations at the CNS Socioeconomic Session.

Commitment to Young Neurosurgeons

The CSNS has reached out beyond its traditional members in the past several years to try to encourage participation by young neurosurgeons. The CSNS Young Neurosurgeons Committee (created nine years ago) has been hugely successful in involving new participants in the CSNS processes and propelling several young neurosurgeons into positions of leadership in the organization.

This past year, the CSNS created a resident delegate position for each quadrant and obtained funding for meeting attendance from outside sponsorship. The involvement of residents early in their career is important to bring a balanced perspective to the CSNS, to better educate youthful neurosurgeons about political and practice issues never encountered in training, and to develop a cadre of future leaders knowledgeable, conversant and active in socioeconomic affairs. ■

For more information on the CSNS, contact Lyal G. Leibrock, MD, Chair of CSNS, at (402) 559-4301 or via e-mail at lleibroc@unmc.edu.

This is the first in a series of articles that highlight an AANS Committee or Task Force and the important work these volunteer groups perform on your behalf.

Focused on the Future

AANS Membership is Key to Your Professional Success.

At this critical time in our profession, the AANS has become the true leader and effective advocate for neurosurgery. Whether it's increased competition from other specialties, or the challenges thrust upon us by federal agencies and managed care organizations, the AANS has stepped forward to meet some of the toughest obstacles we face.

Your organization is positioned to tackle some of these challenges through activities and programs designed to meet AANS members' growing needs, as well as put neurosurgery's best foot forward. Following are some ways the AANS is working for you.

Provider of Scientific Knowledge

The AANS is the leader in the communication of scientific knowledge within the field, publishing numerous reference books, texts on clinical neurosurgical topics and on the history of neurosurgery, and *Neurosurgical Operative Atlases*. The AANS also publishes three scholarly scientific journals: *Journal of Neurosurgery*, the premier monthly neurosurgical research journal; *Journal of Neurosurgery: Spine*, a scientific quarterly focusing on disorders of the spine; and *Neurosurgical Focus*TM, the only award-winning, online scientific journal serving the field.

Resource for Socioeconomic Information

The AANS provides members with a wealth of socioeconomic resources to help their practices prosper, such as:

- **AANS Bulletin:** The first socioeconomic and professional quarterly for neurosurgeons featuring coding advice, practice management tips and legislative news.

- **AANS Coding Hotline:** The premier service that provides members with individualized coding assistance at a modest cost.

- **Coding and Practice Management Courses:** All-new courses that teach members and their practice staff the latest coding and reimbursement techniques and practice-building skills.

- **Malpractice Insurance Program:** The AANS recently selected The Doctors' Company to offer a discounted professional liability insurance program to its members.

- **Medicare/Medicaid Fraud and Abuse Insurance:** Affordable protection covering the legal costs associated with civil Medicare or Medicaid billing fraud proceedings.

- **AMA CPT Editorial Advisory Panel:** AANS volunteers serve on this important AMA advisory group that works to develop appropriate CPT codes for various medical and surgical procedures.

- **Professional Conduct:** The AANS Professional Conduct Committee provides a recourse for members aggrieved by another member in a tort proceeding.

- **Expert Witness File:** The AANS maintains an Expert Witness Transcript File that can be accessed by legal counsel in litigation involving a neurosurgeon.

- **Practice Management Books:** The AANS is currently developing a collection of publications that will offer information on the practical aspects of managing a medical practice.

- **Legislative and Regulatory Outreach:** The AANS has taken an active role in representing neurosurgeons and their patients on a wide range of issues, through the efforts of its Committee on Physician Reimbursement and the grassroots efforts of neurosurgeon volunteers. Advocacy activities include halting HCFA physician payment reductions, supporting the passage of managed care reform legislation, and leveling the playing field between physicians and health plans.

Accrediter of Continuing Medical Education

As an organization accredited by the ACCME to provide CME credits for its educational activities, the AANS offers several professional learning opportunities including the Annual Meeting, the largest neurosurgical conference in the world for neurosurgeons. It provides attendees with countless opportunities to learn about the latest innovations in the practice of neurosurgery and to network with colleagues. This year's meeting will take place April 8-13, in San Francisco.

In addition, the AANS offers continuing medical education clinical courses and CME record maintenance that is vital for your re-licensure, hospital and faculty appointments, and national and state medical organization memberships.

Supporter of Clinical Research

The AANS has recently broadened the mission of its Research Foundation to become more active in the area of clinical and basic research funding. The Foundation, now called the Neurosurgery Research and Education Foundation, has granted more than \$2 million to nearly 60 promising researchers over the past 20 years and looks forward to expanding its funding in the future. The AANS also has supported the future of the specialty through an array of special grants and fellowships, including the Van Wagenen Fellowship.

Spokesorganization for Neurosurgery

The AANS, as the spokesorganization for neurosurgery, is committed to raising awareness of the field and the valuable role neurosurgeons play in treating common medical conditions. The AANS offers programs to educate the public about neurological health issues, while at the same time promotes the expertise of the neurosurgeon and the scope of neurosurgical practice to the media, referring physicians, managed care organizations and third-

Continued on page 41

On the Move

Plans to Relocate the AANS National Office are Finalized.

By DEIA LOFENDO

In late spring of 2000, the AANS will have a new address in Rolling Meadows, Illinois. The new National Office, which will be located at 5550 Meadowbrook Drive, was purchased on December 3, 1999 from a pool of available assets, including the projected income from the sale of the 22 South Washington Street facility, the two warehouse buildings in Rosemont, Illinois, and industrial bond money. According to Dave Fellers, CAE, Executive Director of the AANS, "The new National Office will be significantly larger than our present facility and allow us to more efficiently operate by consolidating our three buildings in Illinois and office in New Hampshire."

Bigger and Better

The new AANS National Office is 36,020 square feet and built on a 2.4-acre site. The AANS will occupy nearly two-thirds of the space and lease approximately 12,000 square feet, resulting in a projected income of over \$100,000. The AANS has invited the THINK FIRST Foundation to move to the new location in Rolling Meadows and has agreed to write-off the \$24,000 build-out cost for the 1,000-plus square feet proposed to the Foundation. THINK FIRST has accepted the offer and has signed a three-year lease with the AANS.

The Rolling Meadows facility is located approximately 15 minutes northwest of O'Hare International Airport and is in close proximity to several other medical organizations, including the American Academy of Pediatrics, American Academy of Dermatology and the American Society of Plastic Surgeons.



New Address (Effective late spring 2000) 5550 Meadowbrook Drive • Rolling Meadows, Illinois 60008 • While the toll-free phone number, (888) 566-AANS, will stay the same, AANS will have a new "local" phone number and new telephone extensions. Watch for more details in the mail and via e-mail, or visit our Web site at www.neurosurgery.org/aans.

Amenities Abound

The facility, which was constructed in 1988, will house all AANS staff under one roof, with the exception of the Washington Office and the *Journal of Neurosurgery*. It will span one level and provide ample meeting space and a plethora of amenities to staff and members, including three conference rooms, a full-scale kitchen, a computer training facility, storage and mail facilities and a detailed library that will house some of the most historically significant neuroscience publications of all time.

In addition, the new building will also provide members with an opportunity to showcase memorabilia related to the development of the specialty with special Archive display cases in the lobby. The display cases will include such items as Harvey Cushing's lab coat, his artwork, and prototype Cushing instruments; materials related to pre-20th century neuroscience; the complete collection of busts by neurosurgeon/artist Emil Seletz, MD; as well as materials related to the development of the AANS.

The AANS Board of Directors encourages members to visit the new headquarters facility and make use of its ample meeting space. According to Mr. Fellers, "We believe that the new, top-notch facility reflects the caliber of our members and are pleased to call the Rolling Meadows building our home. We welcome all of our members to visit our new National Office and take advantage of all that it has to offer." ■

FAST FACTS ON THE AANS ROLLING MEADOWS FACILITY

The facility is 36,020 square feet. AANS will occupy 24,000 square feet and lease 1,000 square feet to the THINK FIRST Foundation and 11,000 square feet to outside tenants.

The facility was constructed in 1988 on a 2.4-acre site.

All staff will be located under one roof on the same floor, with the exception of the Washington Office and *Journal of Neurosurgery*.

Spacious meeting space, including three conference rooms, a library and special Archive displays.

Projected move date: late spring 2000.

San Francisco:

Welcoming the World of Neurosurgery.

By DEIA LOFENDO

Plans are coming to fruition for the 68th Annual Meeting of the American Association of Neurological Surgeons, to be held April 8-13, 2000 in San Francisco, California. Steven L. Giannotta, MD, AANS Annual Meeting Chair, said, "President Martin Weiss, MD, and the Planning Committee have organized a unique educational program, while the Local Arrangement Chairs, Dr. and Mrs. Lawrence Pitts and Dr. and Mrs. Mitchel Berger, have planned a wonderful selection of tours and evening events that showcase all that San Francisco has to offer."

"The meeting promises to be first-rate," Martin H. Weiss, MD, AANS President, added. "The Scientific Sessions and exhibits will showcase the most advanced technical innovations in the field, and position the AANS Annual Meeting as the preeminent educational gathering for neurosurgery."

VOLUNTEERS NEEDED

If you're interested in playing an integral role in the AANS Annual Meeting, the Marshal's Subcommittee is the place to start. This Subcommittee depends on the volunteer activity of many individuals to ensure the quality and success of each session. Volunteering will allow you to meet senior members of the organization and to attend the session you Marshal for free. Some of the Marshal's responsibilities include ticket collection, evaluation distribution and collection, and audiovisual assistance at Breakfast Seminars and Practical Clinics. If you are interested in serving as a Marshal, contact the AANS Meetings Department at (888) 566-AANS.

PROGRAM HIGHLIGHTS

■ **Special Symposium** Sunday, April 9, 8 a.m. Paul C. McCormick, MD, will lead a full-day symposium titled, "The 21st Century Neurosurgical Organization: Strategic Management of Neurosurgical Practice in a Competitive Market Environment." A panel of consultants, CEOs and neurosurgical practice managers will examine the challenges and opportunities for neurosurgical practice within an increasingly competitive health care environment.

■ **Opening Reception** Sunday, April 9, 6:30 p.m. The AANS will welcome members to the 68th Annual Meeting with a spectacular Opening Reception in the Yerba Buena Ballroom of the San Francisco Marriott. The gala event will be the perfect place for you to visit with colleagues, while admiring life-size recreations of sculptures and

Honors and Awards

In addition to the Scientific Program, the following AANS members will be recognized with honors:

George Ablin, MD, will be honored posthumously with the 2000 Distinguished Service Award. Dr. Ablin is being recognized for his service to the AANS, the neurosurgical community and his patients.

Merwyn Bagan, MD, MPH, will receive the 2000 Humanitarian Award in recognition of his extensive volunteer work in Nepal, where he provided neurosurgical care to patients and training to physicians. Dr. Bagan, the 1992-93 AANS President, has been instrumental in obtaining more than \$1 million in medical equipment for the Tribhuvan University Teaching Hospital in Nepal.

P. Charles Garell, MD, will receive the 2000 Van Wagenen Fellowship. He will use the Fellowship to study under Alim-Louis Benabid, MD, PhD, at the Centre Hospitalier Universitaire in Grenoble, France.

John A. Jane, Sr., MD, PhD, will receive the Decade of the Brain Medal in recognition of his pioneering work in the area of brain injury research. Dr. Jane is Chair and David D. Weaver Professor in the Department of Neurological Surgery at the University of Virginia (Charlottesville) and Editor of the *Journal of Neurosurgery* and the *Journal of Neurosurgery: Spine*.

Russel H. Patterson, Jr., MD, FACS, will receive the 2000 Cushing Medal for his many years of dedication and service to the field of neurosurgery. He is Chair of the AANS Adjunct Subcommittee on International Associate Membership and was the 1985-86 AANS President.

Robert H. Wilkins, MD, will be presented with the 2000 Distinguished Service Award for his many years of dedicated service to the AANS and the field of neurosurgery.

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paintings by reknown artists, such as Monet and Picasso. Shuttle busses will be provided from select AANS hotels, and hors d'ouvres and beverages will be served.

■ **Special Lecture I** Monday, April 10, 11:40 a.m. W. French Anderson, MD, will deliver an interesting presentation titled, "Human Gene Therapy." Dr. Anderson is an international expert in the field of molecular genetics and led the team of researchers that performed the first approved human gene therapy trial in 1990.

■ **Presidential Address** Monday, April 10, 12:20 p.m. Martin H. Weiss, MD, will discuss the evolution of North American neurosurgical societies and the legacy organizations, such as the AANS, must create.

■ **Special Lecture II: Schneider Lecture** Tuesday, April 11, 11:25 a.m. AANS members are invited to attend a special presentation by John A. Jane, Sr., MD, PhD, Chair and David D. Weaver Professor in the Department of Neurological Surgery at the University of Virginia (Charlottesville) and Editor of the *Journal of Neurosurgery* and *Journal of Neurosurgery: Spine*. Dr. Jane will discuss “The Orbit and Paranasal Sinuses—the Role of the Neurosurgeon.”

■ **Cushing Oration** Tuesday, April 11, 12:10 p.m. Acclaimed historian, Pulitzer Prize winning author and former Harvard professor, Doris Kearns Goodwin, will deliver this year’s Cushing Oration, which will focus on “Leadership in the New Millennium.”

■ **Special Lecture III** Wednesday, April 12, 11:15 a.m. John E. Wennberg, MD, Director of the Center for the Evaluative Clinical Sciences at Dartmouth Medical School and co-founder of the Foundation for Informed Medical Decision Making, will discuss neurosurgical outcomes.

■ **Special Symposium** Wednesday, April 12, 11:45 a.m. Victor Fuchs, PhD, Henry J. Kaiser, Jr., Professor Emeritus in the Department of Economics and Health Research and Policy at Stanford University, will conduct a special socioeconomic symposium titled, “The Future of Medicare.”

■ **Young Neurosurgeons Session** Wednesday, April 12, 1 p.m. Volker K.H. Sonntag, MD, Vice Chair and Director of the Residency Program for the Division of Neurological Surgery at Barrow Neurological Institute, will discuss, “Subspecialization: Private Versus Academic Practice.” In his talk, Dr. Sonntag will examine the pros and cons of private versus academic practice and discuss the topic of neurosurgical subspecialization.

■ **A Taste of California Wines Reception** Wednesday, April 12, 6:30 p.m. In lieu of this year’s Annual Reception and Banquet, the AANS will host a one-of-a-kind gourmet wine-tasting event. The wine-tasting will be conveniently located in the Yerba Buena Ballroom of the San Francisco Marriott, where vinyard representatives will be on hand to present a selection of wines and answer your questions.

■ **Special Course I: Video Surgical Tutorial** Thursday, April 13, 9:45 a.m. Expert faculty will discuss surgical techniques for a variety of intracranial approaches in video format. Presentations will emphasize microsurgical anatomy and operative technique.

■ **Special Course II: Surgical Management of Movement Disorders** Thursday, April 13, 9:45 a.m. This course focuses on current concepts and management strategies for the treatment of movement disorders. Stereotactic methods and techniques of anatomical and physiological targeting will be discussed, including brain stimulation.

■ **Special Course III: Sports Neurotrauma—A Special Symposium** Thursday, April 13, 9:45 a.m. This course is designed to clarify the assessment and management of sports-related head and spinal cord injuries, including return-to-play guidelines. In addition, the course will highlight the long-term assessment of sports-related concussions and the differences that may exist in applying guidelines to high school, collegiate and professional athletes. ■

2000 ANNUAL MEETING PROGRAM AT-A-GLANCE

SATURDAY, APRIL 8

Practical Clinics 8 a.m. - 5 p.m.

SUNDAY, APRIL 9

Practical Clinics 8 a.m. - 5 p.m.
Special Symposium 8 a.m. - 5 p.m.
Opening Reception 6:30 - 9 p.m.

MONDAY, APRIL 10

Breakfast Seminars 7:30 - 9:30 a.m.
Exhibit Hall Open 9 a.m. - 4:30 p.m.
Plenary Session I 9:45 - 11:40 a.m.
Special Lecture I 11:40 a.m. - 12:20 p.m.
Presidential Address 12:20 - 1 p.m.
Poster Viewing 2 - 2:45 p.m.
Scientific Sessions I-IV 2:45 - 5:15 p.m.
Business Meeting 5:15 - 6:15 p.m.

TUESDAY, APRIL 11

Breakfast Seminars 7:30 - 9:30 a.m.
Exhibit Hall Open 9 a.m. - 4:30 p.m.
Plenary Session II 9:45 - 11:25 a.m.
Special Lecture II 11:25 a.m. - 12:10 p.m.
Cushing Oration 12:10 - 1 p.m.
Poster Viewing 2 - 2:45 p.m.
Section Sessions 2:45 - 5:30 p.m.
(Cerebrovascular, Stereotactic and Functional, Neurotrauma and Critical Care, and Pediatric)

WEDNESDAY, APRIL 12

Breakfast Seminars 7:30 - 9:30 a.m.
Exhibit Hall Open 9 a.m. - 3:30 p.m.
Scientific Sections V-VIII 9:45 - 11:15 a.m.
Special Lecture III 11:15 - 11:45 a.m.
Special Symposium 11:45 a.m. - 1 p.m.
Young Neurosurgeons Session 1 - 2 p.m.
Poster Viewing 2 - 2:45 p.m.
Section Sessions 2:45 - 5:30 p.m.
(Pain, Tumor, Spine and Peripheral Nerves, and History)
Wine Reception 6:30 - 8:30 p.m.

THURSDAY, APRIL 13

Breakfast Seminars 7:30 - 9:30 a.m.
Special Courses I-III 9:45 a.m. - 12 p.m.

Meeting Members' Needs

Members are Pleased With AANS Products and Services.

In the first comprehensive AANS member needs survey in more than three years, members reported they are pleased with the quality of AANS service and member benefits. "AANS is the leading organization for the neurosurgical profession," said Martin H. Weiss, MD, AANS President. "We're pleased that the offerings members feel are most valuable to them are the same offerings that leadership identifies as priority projects."

The majority of survey respondents feel that they are well-informed about AANS activities and services, that staff is responsive to their needs, and view AANS programs as excellent or good. Members agreed that AANS should continually assess the opinions of the membership through written surveys and focus groups.

According to the member needs survey, members see the AANS as a force for

advancing education, representation, public education and research. Member feedback will be used in strategic planning to determine where to allocate vital resources.

Members were asked to identify the most important benefits of AANS membership, as well as the products and services that offer members the greatest value. *The Journal of Neurosurgery*, the *Directory of Neurological Surgery*, and the AANS Annual Meeting ranked the highest. Continuing medical education tracking and member representation at the national level scored the second highest ratings. Other member benefits cited include:

- Information on regulatory issues and changes in the health care environment
- *Journal of Neurosurgery: Spine*
- AANS Neurosurgical Atlases and books on neurosurgical clinical topics
- Eligibility for Section membership

- Outcomes data collection
- AANS continuing education courses

Managed care issues emerged as the trend making the most impact on respondents' practices. Eighty-six percent identified Medicare fee schedules as having a great impact on their practice. Decreasing reimbursement (75%), growth of managed care (68%) and national health care changes (61%) followed closely behind. An equal number of respondents (61%) rated state-level health care changes as having a high impact on their practice.

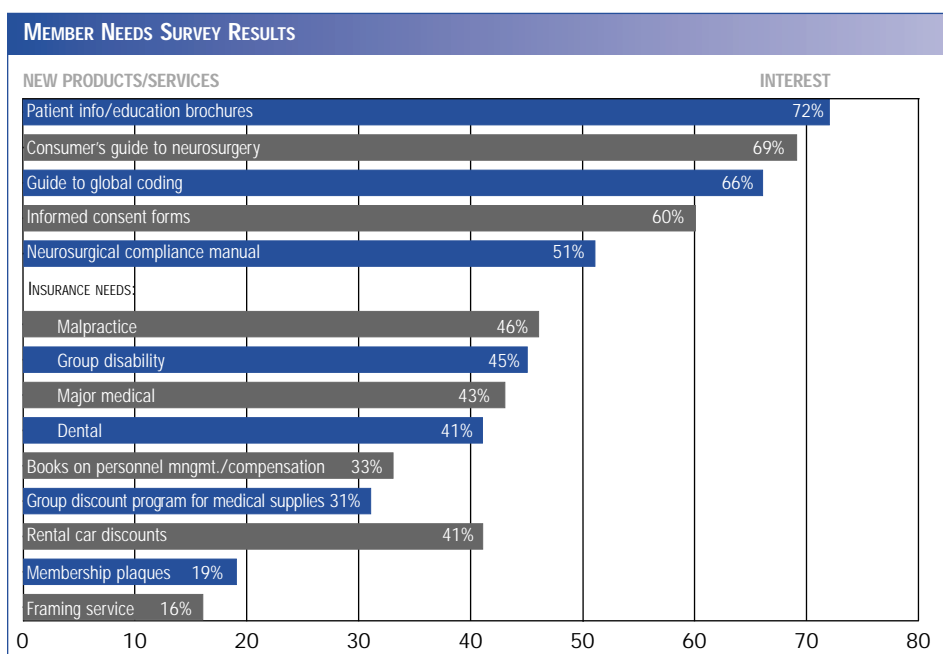
Members want AANS to take an active role in two major trends: our relationship with the neurosurgical community, and public education. Eighty-three percent of respondents believe neurosurgical organizations should consolidate their activities. An equal number cited the enforcement of the AANS Code of Ethics as essential.

Members want AANS to educate the public about neurosurgery, particularly regarding Board certification: 77 percent say AANS should aggressively position Board-certified neurosurgeons to the general public. In addition, 72 percent are interested in purchasing patient information on neurosurgical procedures/topics and 69 percent want a consumer's guide to neurosurgery. Members also voiced support of media efforts, with 61 percent indicating AANS should allocate funds to cultivate positive media coverage of neurosurgery.

Members also cited other areas in which AANS could help them (see graph).

AANS has already begun to address several of the issues prominent in the survey. Public education campaigns (including media efforts) and professional liability program proposals are under development (see malpractice insurance program sidebar on page 34). Many new practice management books offer guidance on practicing successfully under managed care. Based on an analysis of this survey, an assortment of new programs will be offered this year.

For more information, call Member Services at (888) 566-AANS. ■



New Name, Broader Mission

The AANS Introduces the New Neurosurgery Research and Education Foundation.

The Executive Council of the Research Foundation of the AANS has been hard at work on a variety of fronts, most importantly, reviewing the mission of the Foundation. At the AANS Board Meeting in Chicago last November, several new strategies were discussed to make the Foundation more attentive to the needs of our members, while positioning the Foundation as an attractive vehicle for raising increased research funds.

Among the initiatives approved by the AANS Board is a new name for the Foundation: the Neurosurgery Research and Education Foundation (NREF). The Foundation's new name reflects its expanded mission to be more involved with all of neurosurgery, while reinforcing how research is an important educational tool for the neurosurgeon.

Among the new areas NREF is exploring is the opportunity to co-fund studies in Section-related areas. This will require that the Foundation carefully examine grant applications submitted to NREF, as well as those submitted directly to the Sections. We look forward to building up these relationships and funding more investigations in the future.

1999 Campaign

During this past year, we have seen marked improvement in the support from our Corporate Associates (see chart below). We are grateful for the gifts that we have received from our 1999 corporate sponsors, and hope for renewed support as we enter 2000. Two companies—Medtronic/Sofamor Danek and Codman/Depuy Acromed/Johnson & Johnson—

have stepped-up and provided Superior Associate level funds for named fellowships this year.

We also are pleased to commence a new relationship with the American Brain Tumor Association (ABTA), which has offered to fund a new grant of \$40,000 towards a clinical brain tumor study. Our Scientific Advisory Committee has been reviewing the applications that have been submitted for consideration of our Research Fellowship or Young Clinician Investigator Awards, as well as new studies that closely match the needs of the ABTA.

All of our 2000 Awards will be announced at this year's AANS Annual Meeting in San Francisco, with new funding to commence July 1, 2000.

Finally, NREF wishes to thank the late Virginia (Dr. David) Reeves and Lester Mount, MD, who have both blessed the Foundation with significant gifts from their estates.

Make Your Contribution Today

NREF encourages you to support the future of neurosurgery by making a contribution to the Foundation today. Gifts can be made in conjunction with your annual dues statement payment, or in response to our annual appeal. Gifts of appreciated securities are ideal methods of showing your support, and may actually help you in avoiding certain tax liabilities. A gift in honor or memory of a loved one or mentor is a wonderful way to show your gratitude to someone important to you and your career.

To make your contribution, contact the Neurosurgery Research and Education Foundation at (888) 566-AANS. ■

CORPORATE ASSOCIATES PROGRAM

The Executive Council of the Neurosurgery Research and Education Foundation gratefully acknowledges the financial support given by the following companies to the 1999 campaign.

Superior Associate

(Gifts of \$75,000 or more)

Codman/Depuy Acromed/Johnson & Johnson
Medtronic/Sofamor Danek

Sustaining Associate

(Gifts of \$50,000 to \$74,999)

Boston Scientific
Cordis

Supporting Associate

(Gifts of \$25,000 to \$49,999)

American Brain Tumor Association
Aventis
Elekta

Contributing Associate

(Gifts of \$10,000 to \$24,999)

Sulzer Spinetech, Inc.

Associate

(Gifts of \$5,000 to \$9,999)

Aesculap
Anspach
Baxter
Bayer Corporation
Brainlab
Carl Zeiss, Inc.
Komet Medical
Leica, Inc.
NMT Neurosciences
PMT® Corporation
Radionics
Stryker Spine
Surgical Dynamics
Synthes Spine/Synthes Maxillofacial

Julian T. Hoff, MD, Chair of the Neurosurgery Research and Education Foundation, and **John R. O'Connell**, Director of Development, contributed to this report.

Focus on Education

AANS Queries Members on Their CME Needs.

In an effort to meet its members' growing needs, the AANS Department of Education and Practice Management (formerly the Professional Development Program) conducted a series of surveys and focus groups that queried AANS members on how the Association can enhance its educational courses, products, programs and services. The key themes, issues and concerns that emerged from the surveys and focus groups are detailed below.

Membership Surveys

In September 1999, the AANS mailed two surveys to a sample of 2,371 members. The first survey assessed members' interest in electronic CME products, and the second measured AANS members' interest in expanded neurosurgical review courses.

Of the 1,511 electronic CME surveys distributed, 468 were returned, representing a 31 percent response rate. Ninety-five percent of the respondents indicated that they use a home or business computer, and more than 94 percent stated that they have Internet access and use CD-ROMs. Thirty-nine percent of the respondents indicated a "great" interest in purchasing AANS Annual Meeting courses and examinations on the Internet, and 28 percent expressed an interest in courses that offer CME examinations on CD-ROM.

"This information obtained from the surveys will be of great value, as we set out to determine how to best tailor our continuing medical education courses to meet AANS members' growing needs," said David F. Jimenez, MD, Chair of the Education Committee.

When queried on how they receive their CME credits, respondents indicated a variety of sources, namely the AANS and

CNS; regional/state/local neurosurgical groups; other professional societies; or industry-sponsored groups. The survey also revealed that the majority of neurosurgeons receive their required CME credits by attending AANS and CNS meetings followed by other professional society conferences, state medical society meetings and industry events. The number of state-mandated CME credits differed greatly among the respondents, ranging from zero to 150. Neurosurgeons in academic settings stated that they usually obtain more credits than needed, whereas some community practitioners indicated a difficulty in earning the number of CME credits needed.

Of the 860 neurosurgical review course surveys distributed, 173 members responded. Of those that responded, 71 percent said that they would be interested in registering for a review course. Most would prefer to take a course in their geographical area, and 74 percent were willing to retake a review course every 3-5 years. Sixty-five percent of the respondents indicated that they would take advantage of self-assessment courses in neurological surgery, and more than 97 percent expressed an interest in electronic self assessment tools, such as CD-ROMs (61 percent) and the Internet (58 percent).

A final survey, which was included in the Fall 1999/Winter 2000 *Bulletin*, queried members on the focus of current and future AANS continuing medical education courses. Of the 4,200 questionnaires distributed, 149 were returned. Of those that responded, 90 percent look to AANS-sponsored courses when evaluating their continuing education needs. In particular, reimbursement and coding

courses ranked high, however many respondents indicated a greater interest in attending clinical courses.

Among the top rated topics for future clinical courses were: hands-on spinal instrumentation, didactic/interactive spine decision-making, didactic/interactive pain management decision-making, hands-on cervical spine, hands-on neuroendoscopy and didactic/interactive tumor decision-making courses. Among the leading socioeconomic topics for future courses were: reimbursement issues, coding regulations, quality improvement, outcomes studies, and receivables and fee schedules.

Focus Groups

The feedback from the focus groups, which took place in October 1999, mirrored many of the survey results. Group participants commented on the educational value of the AANS and CNS meetings, but agreed that smaller Section and regional meetings are more focused and provide participants with more practical information in a particular area of study.

When asked their opinion on AANS-sponsored CME courses, group participants stated that they were pleased with the AANS' high-caliber socioeconomic courses and offered suggestions for enhancing their clinical courses, namely improve marketing efforts, seek input from Sections on course content and structure, and coordinate the educational offerings among the different neurosurgical programs, including the AANS Annual Meeting. Focus group members also suggested that the AANS explore the possibility of offering medico-legal courses that focus on medical insurance, torts and worker's compensation.

"The AANS Education Committee is pleased with the feedback that we have received through our recent surveys and focus groups," said Dr. Jimenez. "This was a valuable exercise in learning about our members wants and needs, and we plan to continue to query our members on a regular basis." ■

Section News

Neurosurgical Focus™ Journal Club

Neurosurgical Focus, the online segment of *The Journal of Neurosurgery*, is pleased to announce a new section of *Focus*—*The Neurosurgical Journal Club*. The new section will consist of abstracts of neurosurgical interest culled from peer-reviewed journals throughout the world, which have been reviewed by our Editorial Panel. The proliferation of medical literature has created a need for capturing articles of importance to neurosurgical practice and education in a central repository. *The Neurosurgical Journal Club* will provide this resource to the neurosurgical community. We hope that you will enjoy this new opportunity to scan neurosurgical literature at the click of a button.

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Section on Cerebrovascular Surgery The Section is actively involved in many projects affecting the current and future practice of all neurosurgeons. The American Stroke Association, with critical input from several members of the Section is in the process of finalizing guidelines for the treatment of unruptured intracranial aneurysms. These guidelines, which will incorporate an analysis of the latest data on the natural history of these lesions, will be published in the journal *Stroke*. The Section also is actively developing outcome measures for cerebrovascular procedures. Robert E. Harbaugh, MD, FACS, who heads this project, reports that there are 400 aneurysm patients enrolled in this study. The data is currently being analyzed. There is also an on-going outcomes study on carotid endarterectomy that has over 150 patients enrolled, and participation is available to any member on N://OC®.

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Section on Neurotrauma and Critical Care In order to determine the current state of practice among neurosurgeons, the Section on Neurotrauma and Critical Care has devised a survey to examine the use of sedation and paralysis in the head-injured patient and the influence of a neurosurgeon's practice setting. The survey has been sent to over 3,000 neurosurgeons via e-mail. The survey is being conducted largely online at www.ucsf.edu/neuro and requires a user ID to participate. If you have not received an e-mail notification and would like to participate, contact the principal investigator, David M. McKalip, MD, at (415) 206-8300 or via e-mail at mckalip@neurosurg.ucsf.edu.

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Section on Pain At this year's AANS Meeting, the Section on Pain will present its William Sweet Young Investigator's Award to Alon Y. Mogilner, MD. The Award is presented annually to a young neurosurgeon within five years of completing his or her neurosurgical training and is accompanied by a \$1,000 stipend.

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Section on Pediatric Neurological Surgery At the recent Pediatric Section Meeting in Atlanta, Georgia, the Kenneth Shulman Award, which recognizes the best paper given by a resident in training, was presented to Susan R. Durham, MD, a senior resident at the University of Pennsylvania. Her paper was titled, "The Surprisingly Sturdy Infant Brain: Why is it More Resistant to Focal Injury?" She will re-present her paper and officially receive her award at the upcoming Pediatric Section Session at the AANS Annual Meeting in San Francisco.

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Section on Spine and Peripheral Nerves The Spine Section recently recognized Viswanathan Rajaraman, MD, FRCS, a resident at UMDNJ New Jersey Medical School (Newark), with the 2000 Mayfield Clinic Science Award and Neill M. Wright, MD, a resident at Washington University (St. Louis), with the 2000 Mayfield Basic Science Award, at this year's Section meeting in Indian Wells, California. The Mayfield Award is presented annually to a neurosurgical resident(s) or fellow(s) who has submitted an outstanding research manuscript regarding a laboratory or clinical investigation in the area of spine or peripheral nerve disorders.

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Section on Tumors The Section on Tumors has established a special section on NEUROSURGERY://ON-CALL® that allows researchers to list genetic vectors that have either been constructed or are available through their laboratory efforts. The goal of the site is to facilitate communication among neurosurgical laboratories with similar interests and to minimize duplication of efforts. A username and password is required to access this section of the site. For more information on this service, contact Timothy Ryken, MD, via e-mail at timothy-ryken@uiowa.edu.

Continued on next page

Young Neurosurgeons Stage Silent Auction

Under the leadership of B. Gregory Thompson, Jr., MD, the Young Neurosurgeons Committee will host its Second Annual Silent Auction. The event, which will be held at the 2000 AANS Annual Meeting, will benefit the Neurosurgery Research and Education Foundation. All meeting attendees are encouraged to stop by the AANS Member Services Booth April 10-11 to bid on items up for auction.

AANS Sponsors Malpractice Insurance Program

AANS has selected The Doctors' Company (TDC) to offer a discounted professional liability insurance program to its members. TDC will provide a 10 percent discount on annual premiums as a membership benefit of AANS, with an additional discount available for claims-free experience. TDC also will provide substantial discounts for new physicians, coverage for Locum Tenens, choice of liability limits, portability and free retirement tail coverage. Visit the TDC exhibit at the AANS Meeting, phone (800) 421-2368 or visit www.thedoctors.com for an application.

News From AANS

Women in Neurosurgery This year, Women in Neurosurgery (WINS) celebrated its 10-year anniversary. Over the past decade, the group has gained much recognition within the neurosurgical community, as well as achieved the following accomplishments: 1) developed a Web site (www.neurosurgerywins.org); 2) created the Women in Neurosurgery Traveling Award; 3) established numerous networking opportunities for medical students, residents and young professionals; and 4) developed an educational brochure for medical students on the role of the neurosurgeon. For more information on WINS, contact Daria D. Schooler, MD, at (812) 375-0000.

Young Neurosurgeons Committee A particular concern for many young neurosurgeons is the increasing economic pressures and legal complexities that face new neurosurgery residency graduates. There is wide sentiment that neurosurgery training in this country provides excellent medical training, but little preparedness for dealing with managed care organization. Adam I. Lewis, MD, and Craig H. Rabb, MD,

have been charged with developing a survey to assess the extent and implications of this problem. For more information, contact Dr. Lewis at (601) 366-1011 or Dr. Rabb at (303) 788-4000.

Committee of Military Neurosurgeons The Committee of Military Neurosurgeons is continuing progress on many exciting initiatives, including the development of a head injury data collection sheet that will be sent with any neurosurgeon mobilized to a combat zone. A storage mechanism for this data has been arranged and will facilitate future study and improvements in our management of combat injuries. In an attempt to better inform the membership about the unique aspects of military neurosurgery, the committee hopes to display DEPMEDS operating room suites at meetings in the near future.

Preparation also has begun for the publication of a textbook on military neurosurgery that hopefully will be sent to AANS and CNS members free of charge. A handbook for neurosurgeons entering active duty is also being prepared, and should be available within the year. For further information or to become a member of the Military Committee, contact William Monacci, MD, at (202) 782-9800 or via e-mail at: monacci@vs.wramc.amedd.army.mil.

Faculty Appreciation

The Department of Education & Practice Management thanks the following faculty who participated in 1999 CME courses:

Eben Alexander, III, MD
Robert Alonso, MD
Greg Bailey, MD
Roy A.E. Bakay, MD
Nevan G. Baldwin, MD
Perry A. Ball, MD
Tom Baumann, PhD
Allan J. Belzberg, MD
Edward C. Benzel, MD*
Ajay K. Bindal, MD
Kim J. Burchiel, MD, FACS*
Jacques Caemaert, MD
Anthony Caputy, MD
Fady Charbel, MD
Michael Chicoine, MD
Lawrence S. Chin, MD
Alan R. Cohen, MD*

Beverly Cooke, MD
G. Rees Cosgrove, MD, FRCS
William T. Couldwell, MD*
Carolyn Coulter, RN, CNRN*
Gayle Dasher, RN, MSN, CNRN
James Ecklund, MD
Marc E. Eichler, MD
Lisa A. Ferrara, MS
Enrique Ferrer, MD, PhD
Winfield Fisher III, MD
Kevin T. Foley, MD
Kenneth A. Follett, MD, PhD
Allan Friedman, MD
David Frim, MD
Herbert E. Fuchs, MD, PhD
Deborah Garcia, RN
Remo Gay, JD
Kevin J. Gibbons, MD
Ziya L. Gokaslan, MD
Julius Goodman, MD*
John P. Gorecki, MD
David Gostnell, PhD
Scott Grafton, MD
Robert G. Grossman, MD*

Regis W. Haid, Jr., MD
Andrea L. Halliday, MD
Samuel J. Hassenbusch, MD, PhD*
Mary Heinricher, PhD
Jaimie M. Henderson, MD
Alan Hirschfeld, MD
Norman Horwitz, MD
Alan Hudson, MD
Karen Hutsel, RN
Larissa Jeffreys, RN
Hae-Dong Jho, MD
J. Patrick Johnson, MD
Fredrick Junn, MD
Yucel Kanpolat, MD
Bruce Kaufman, MD
David G. Kline, MD*
Thomas J. Leipzig, MD
Denise Miller Lemke, RN
Peter Letarte, MD
Allan D. Levi, MD
Mark Malkoff, MD
Christian Matula, MD
Bruce M. McCormack, MD
John McGillicuddy, MD
William Ondo, MD
Thomas C. Origitano, MD

Richard K. Osenbach, MD
Troy D. Payner, MD
Axel Perneczky, MD
John Piper, MD
Gregory Przybylski, MD
Kathleen Redelman, RN, BSN, CNRN
Richard A. Roski, MD, FACS*
Michael J. Rosner, MD*
Oren Sagher, MD
Joel L. Seres, MD
Richard Simpson, Jr., MD
Brett Stacey, MD
Jamal M. Taha, MD
Robert Tiel, MD
Richard Toselli, MD
Gregory R. Trost, MD
Jamie Ullman, MD
Jerrold Vitek, MD
Dennis G. Vollmer, MD*
Simcha Jay Weller, MD
Paul A. Young, PhD
Paul H. Young, MD
Eric Zager, MD
Seth Zeidman, MD
*Course Chair or Co-Chair

Names in the News

Dave Fellers, CAE, Executive Director of the AANS, was recently elected Chair of the Specialty Society Care Coalition, a coalition of surgical specialty medical societies led by a steering committee with representatives from the American Association of Neurological Surgeons, American Academy of Dermatology, American Academy of Ophthalmology, American Academy of Orthopaedic Surgeons, American Academy of Otolaryngology, American College of Cardiology, American Society of Plastic Surgeons, American Urological Association, and the Society for Thoracic Surgeons.

David F. Jimenez, MD, will participate, on behalf of the AANS, in

the American Medical Association (AMA)/Glaxo Emerging Leaders Development Program, offered in conjunction with the AMA's National Leadership Development Conference. The program is open to 50 emerging physician leaders on an invitation-only basis. Participants in the program were selected for their demonstrated leadership potential, commitment to leadership development, participation in organized medicine, and diversity of leadership experience. Dr. Jimenez is Chair of the AANS Education Committee and former Chair of the AANS Young Neurosurgeons Committee.

Robert A. Ratcheson, MD, has been appointed by the AMA Board of Trustees to the AMA's Continuing Medical Education Advisory Committee. The AANS

and CNS had nominated him for this position in spring of 1999. Dr. Ratcheson is Director of the Department of Neurological Surgery at University Hospitals of Cleveland and a member of the AANS Board of Directors.

Russell L. Travis, MD, AANS Immediate Past President, who recently retired from private practice in Lexington, Kentucky, will be working with Cardinal Hill Hospital (also in Lexington), an Easter Seal Society facility. In his new role, Dr. Travis will spend two days a week evaluating back patients and two days teaching residents and working on research projects in the area of head and spinal cord injuries.

Cerebrovascular Disease Funding Available

The AANS/CNS announce the Pharmacia-Upjohn Resident Research Awards in Cerebrovascular Disease:

- Funding available July 1, 2000
- Up to \$15,000 to support a specific research proposal
- Open to residents in North American training programs
- Research related to cerebrovascular disease
- Deadline for applications: March 31, 2000
- Contact: Issam A. Awad, MD, Yale University School of Medicine, (203) 737-2096. Fax: (203) 785-2044.

AANS Bylaws

PROPOSED AMENDMENTS - 2000

CURRENT BYLAWS

Article II, Section 1

The members elected to this Association shall be divided into eight classes:

- A. Active
- B. Active (Provisional)
- C. Active (Foreign)
- D. Associate
- E. Lifetime
- ~~F. International Associate~~
- ~~G. Honorary~~
- ~~H. Candidate~~

PROPOSED AMENDMENTS

Article II, Section 1

The members elected to this Association shall be divided into nine classes:

- A. Active
- B. Active (Provisional)
- C. Active (Foreign)
- D. Associate
- E. Lifetime
- F. International Associate Active
- G. International Associate Active (Provisional)
- H. Honorary
- I. Candidate

EXPLANATION

Increasingly, neurosurgeons from all over the world are participating in AANS Annual Meetings. Many of them would welcome the opportunity to have access to other educational offerings, such as AANS publications and Section meetings. For these reasons, the AANS Membership Committee and the Adjunct Subcommittee on International Associate Membership recommends that two new classes of membership be created, and that the eligibility requirements for International membership be broadened to include ethical, well-trained, and competent neurosurgeons practicing outside of North America, who may not necessarily be considered to have "international recognition." This is in line with the policy of making the AANS more inclusive.

The proposed new classes of membership will require amendments to Article II, Section 1-F, Article X, Section 1, paragraph 5 and Section 2, paragraph 3, (contained herein) specifying the necessary requirements and AANS procedures for processing International Associate Active and International Associate Active (Provisional) membership applications.

Article II, Section 1-B, Paragraph 5

Active (Provisional) Members shall automatically be eligible for Active Membership, upon becoming certified by the American Board of Neurological Surgery or the Royal College of Physicians and Surgeons (Neurosurgery) of Canada, or the Mexican Council of Neurological Surgery, A.C., ~~and upon written request to the Membership Committee, as set forth in Article X, Section 1 of these Bylaws.~~

Article II, Section 1-B, Paragraph 5

Active (Provisional) members shall automatically be eligible for Active membership, upon becoming certified by the American Board of Neurological Surgery or the Royal College of Physicians and Surgeons (Neurosurgery) of Canada, or the Mexican Council of Neurological Surgery, A.C. The communication of such certification to the AANS Member Services Department by the certifying Board shall automatically transfer such certified individuals from Active (Provisional) to Active membership.

A written request to the Membership Committee is required to move an individual from Active (Provisional) to Active membership status. To expedite this process, upon notification from the certifying board, the AANS Member Services Department would automatically transfer certified individuals to Active membership status.

Article II, Section 1-E, Paragraph 2-2

Requests for Lifetime Membership shall be submitted in writing to the ~~Secretary of the Association for consideration by the Board of Directors at its next meeting.~~

Article II, Section 1-E, Paragraph 2-2

Requests for Lifetime membership shall be submitted in writing to the Member Services Department of the Association, which shall review and approve or disapprove the requests.

Requests for Lifetime membership status are presently submitted to the Secretary of the AANS and then considered by the Board of Directors at its next meeting. The proposed amendment would provide for the AANS Member Services Department to conduct the review and approval/disapproval process.

CURRENT BYLAWS

Article II, Section 1-F

International Associate. International Associates shall be individuals who reside beyond the limits of the United States, its Territories, Canada and the Republic of Mexico, and who do not qualify as Active (Foreign) members. ~~They shall be neurological surgeons who are certified or recognized by the peer review process in their native country.~~ They shall be proposed and chosen because of their national and international recognition, devotion and contribution to neurological science.

International Associates may not vote or hold office, but may serve on Committees. They shall be required to pay dues, shall not be required to subscribe to the *Journal of Neurosurgery*, or to attend Annual Meetings.

PROPOSED AMENDMENTS

Article II, Section 1-F

International Associate Active Member. International Associate Active members shall be individuals who reside beyond the limits of the United States, its Territories, Canada and the Republic of Mexico, who do not qualify as Active (Foreign) members. They shall be neurological surgeons who are certified or recognized by the peer review process in their country, who give proof of good professional standing, and who hold an unrestricted license to practice medicine in their country. Where certification or peer review process does not exist or has been in existence for less than five years, they shall be neurological surgeons who are members in good standing of the local or regional neurosurgical society, who give proof of good professional standing, and who hold an unrestricted license to practice medicine in their country.

International Associate Active (Provisional) Member. International Associate Active (Provisional) members shall be neurological surgeons who reside beyond the limits of the United States, its Territories, Canada and the Republic of Mexico, at the time of election to membership, who give proof of good professional standing, who hold an unrestricted license to practice medicine in their country and who have completed a neurosurgical training program in their country within the five years immediately prior to the application for membership, and who have not yet met the certification or peer review process requirements in their country.

International Associate Active (Provisional) membership shall automatically terminate on the fifth anniversary of the Provisional member's completion of a neurosurgical training program, unless, upon prior written request of the Board of Directors, an extension is granted. Such request for extension of International Associate Active (Provisional) membership must demonstrate, to the Board's satisfaction, the circumstances justifying the extension and must further demonstrate that the International Associate Active (Provisional) member is in the process of obtaining the required certification of peer review.

International Associate Active (Provisional) members shall become eligible for International Associate Active member status upon completing the requirements for certification or peer review in their country. Requests for International Associate Active member status shall be submitted in writing, as set forth in Article X, Section 1.

International Associates may not vote or hold office, but may serve on Committees. They shall be required to pay dues, shall not be required to subscribe to the *Journal of Neurosurgery*, or to attend Annual Meetings.

EXPLANATION

This brings the requirements for International Associate Active (Provisional) membership into line with Active (Provisional) membership.

PROPOSED AMENDMENTS TO AANS BYLAWS

The proposed amendments to the AANS Bylaws will be presented for discussion at the AANS Annual Business Meeting, April 10, 2000, in San Francisco.

Voting on proposed amendments will be by mail ballots, which will be sent to the voting membership no more than 45 days following the Annual Business Meeting. If you require a Bylaws book, contact the AANS at (888) 566-AANS.

CURRENT BYLAWS	PROPOSED AMENDMENTS	EXPLANATION
<p>Article II, Section 3</p> <p>The Board of Directors shall have the power to suspend or expel any member who fails to pay dues for more than two years, or who misses three consecutive meetings of the Association without written excuse acceptable to the Board of Directors, or who no longer possesses the qualifications necessary for membership, or who is convicted of a felony involving moral turpitude, and for other reasons as herein provided.</p>	<p>Article II, Section 3</p> <p>The Board of Directors shall have the power to suspend or expel any member who fails to pay dues, or who misses three consecutive meetings of the Association without written excuse acceptable to the Board of Directors, or who no longer possesses the qualifications necessary for membership, or who is convicted of a felony and for other reasons as herein provided.</p>	<p>Current Bylaws require a member to be more than two years delinquent in payment of annual dues before membership can be terminated. This creates additional cost and expense for the organization in continuing to mail reminder notices to those who do not pay, and in generating new dues invoices for members who have not paid their previous statements. This occurs with both AANS and the various Sections who charge dues.</p>
	<p>(NEW) Article III – Dues</p> <p>D. The Board of Directors shall have the right to terminate members who fail to remit their dues within the six months following the due date. One month prior to this termination the Member Services Department will notify the delinquent member to remit the delinquent dues to avoid termination of membership.</p>	<p>Dues are billed on a calendar year basis in September and are due the following January 1st each year. It is recommended that delinquent memberships be terminated when the dues billings are more than 270 days old. This would be approximately June 30 of each year and would represent dues more than six months in arrears from the due date and nine months in arrears from the billing date. A notice would be sent from the Member Services Department notifying members of the proposed action approximately 30 days before the final deadline. Notices will encourage members to remit payment promptly to avoid this consequence.</p>
<p>Article VIII, Section 1, Line F</p> <p>F. The Joint Council of State Neurosurgical Societies</p> <p>Article IX, Section 8</p> <p>Joint Council of State Neurosurgical Societies (JCSNS). The Association, together with the Congress of Neurological Surgeons, shall establish a Joint Council of State Neurosurgical Societies (JCSNS).</p> <p>A. The JCSNS will be comprised of both selected delegates from the State Neurosurgical Societies and of members appointed by the President of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.</p> <p>B. The purpose of the JCSNS is to provide a national forum for the State Neurosurgical Societies of the United States. This forum is primarily for discussion, consideration, and proposals of action regarding socioeconomic issues concerning neurological surgery.</p> <p>C. The rules and regulations governing the operation of the JCSNS are those which have been approved by the Board of Directors of the AANS and the Executive Committee of the CNS.</p>	<p>Article VIII, Section 1, Line F</p> <p>F. The Council of State Neurosurgical Societies</p> <p>Article IX, Section 8</p> <p>Council of State Neurosurgical Societies (CSNS). The Association, together with the Congress of Neurological Surgeons, shall establish a Council of State Neurosurgical Societies (CSNS).</p> <p>A. The CSNS will be comprised of both selected delegates from the State Neurosurgical Societies and of members appointed by the President of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.</p> <p>B. The purpose of the CSNS is to provide a national forum for the State Neurosurgical Societies of the United States. This forum is primarily for discussion, consideration, and proposals of action regarding socioeconomic issues concerning neurological surgery.</p> <p>C. The rules and regulations governing the operation of the CSNS are those which have been approved by the Board of Directors of the AANS and the Executive Committee of the CNS.</p>	<p>Housekeeping: The name of the Joint Council of State Neurosurgical Societies has been changed to the Council of State Neurosurgical Societies, and the Bylaws Committee recommends removing the word “Joint” or letter “J” in each instance that it pertains to the Council of State Neurosurgical Societies (CSNS).</p>

CURRENT BYLAWS	PROPOSED AMENDMENTS	EXPLANATION
<p>Article X, Section 1, Paragraph 5</p> <p>Candidates for International Associate membership shall be proposed in writing by an International Associate or Active (Foreign) Member and confirmed in writing by three AANS Members, at least one of whom shall be an AANS Active, Active (Foreign), or International Associate Member from the applicant's country, or an individual of international stature in that country or geographic region. The proposal shall be submitted to the Adjunct Subcommittee on International Associate membership at least 30 days prior to the Subcommittee's meeting, at which the proposal will be considered and must be accompanied by a curriculum vitae written in English.</p>	<p>Article X, Section 1, Paragraph 5</p> <p>Candidates for International Associate Active and International Associate Active (Provisional) membership shall submit an application, proof of certification or peer review in their country if applicable, a letter from the applicant's Program Director or graduating facility certifying that the applicant has successfully completed the neurosurgical training program, and two letters of recommendation: 1) from an officer of the local or regional neurosurgical society, and 2) from a member of the Association, or a colleague who is also a member of the same local or regional neurosurgical society. The proposal shall be submitted to the Adjunct Subcommittee on International Associate membership at least 30 days prior to the Subcommittee's meeting at which the proposal will be considered, and must be accompanied by a curriculum vitae written in English.</p>	
<p>Article X, Section 2, Paragraph 3</p> <p>The Secretary shall circulate to the voting membership, at least 60 days before the meeting of the Board of Directors, a list of Active, Active (Provisional), Active (Foreign), Associate, and International Associate applicants who meet all requirements for Membership. The Membership shall be requested to submit in writing to the Secretary of the Association any objection or opinion concerning any applicant. Protest regarding any applicant must be received by the Secretary at least 30 days before the Board of Directors Meeting. The Membership Committee and the Adjunct Subcommittee shall reconsider and investigate any application about which a question has been raised. After such reconsideration, the Committee and the Subcommittee shall submit, with their recommendations, the list of applicants to the Board of Directors.</p>	<p>Article X, Section 2, Paragraph 3</p> <p>The Secretary shall circulate to the voting membership, at least 60 days before the meeting of the Board of Directors, a list of Active, Active (Provisional), Active (Foreign), Associate, International Associate <u>Active, and International Associate Active (Provisional)</u> applicants who meet all requirements for membership <u>except those Active (Provisional) members who have met the requirements for Active membership as set forth in Article II Section B.</u> The membership shall be requested to submit in writing to the Secretary of the Association any objection or opinion concerning any applicant. Protest regarding any applicant must be received by the Secretary at least 30 days before the Board of Directors Meeting. The Membership Committee and the Adjunct Subcommittee shall reconsider and investigate any application about which a question has been raised. After such reconsideration, the Committee and the Subcommittee shall submit, with their recommendations, the list of applicants to the Board of Directors.</p>	<p>Housekeeping: If the more inclusive requirements for International Associate membership are accepted.</p>
<p>APPENDIX TO BYLAWS</p> <p>Process</p> <p>A. 6. The Joint Council of State Neurosurgical Societies.</p>	<p>APPENDIX TO BYLAWS</p> <p>Process</p> <p>A. 6. The Council of State Neurosurgical Societies.</p>	<p>Removes the word "Joint" from Council of State Neurosurgical Societies.</p>

Case Review

Understanding the Role of the AANS Professional Conduct Committee.

The AANS Professional Conduct Committee is currently averaging two complaint hearings per year. The complaints mostly involve expert witness testimony, but have included allegations of unethical clinical practices and defamation of one member by another.

In each case, initial complaints are routed to the AANS legal counsel's office, which handles the exchange of information to the point of initial committee review. The AANS Professional Conduct Committee, which consists of members appointed by the President of the AANS, then decides whether a *prima facie* case has been made. If so, a hearing is scheduled.

If not, the parties are informed of the preliminary decision. The complainant may still demand a hearing, but if the committee's decision is substantially unchanged, the complainant must bear the cost of the hearing, which usually consists of court reporter fees and legal counsel fees and expenses. If the complainant does not demand a hearing, the initial conclusion of the committee stands and is sent to the AANS Board of Directors with the recommendation that the complainant be dismissed.

When a hearing does take place, legal counsel may represent either party. (One or more attorneys represent the parties in approximately 50 percent of the hearings.) The complainant and respondent present their respective positions and may be questioned by the committee members. The hearing is transcribed by a court reporter, and the committee files a written report with recommendations to the AANS Board.

Recent Actions of the Committee

In recent hearings, the committee's recommendations have varied from dismissal of

the complaint to letters of censure, six-month membership suspensions, or expulsion. A member for whom some sanction has been recommended may issue a written statement or appear personally before the Board of Directors, where a two-thirds affirmative vote by the Board is required for suspension or expulsion. A sanctioned member may then appeal the action of the Board to the general membership at the Annual Business Meeting of the AANS.

The most frequent causes for sanction over the last several years have involved legal testimony that: 1) showed inadequate knowledge or research into the subject matter under question; 2) failed to recognize diagnostic or treatment methods that differ from what the witness advocates, but which are within the generally accepted standard of care; and 3) consisted of patient advocacy for the hiring attorney.

AANS policy supports impartial testimony by members whether the requiring party is a plaintiff or a defendant. Impartial testimony means representing the accepted range of neurosurgical thought and practice and giving differing viewpoints that are within the spectrum of accepted neurosurgical care.

Resources

The AANS policy on giving legal testimony is in the *AANS Code of Ethics, Section V, Item B*; the *Expert Witness Guidelines, 16A-1 through 4*, and the *Position Statement on Testimony in Professional Liability Cases*, and can be found at www.neurosurgery.org. ■

W. Ben Blackett, MD, JD, is a neurosurgeon in private practice in Tacoma, Washington, a 32-year member of the AANS and Chair of the AANS Professional Conduct Committee.

AANS MEMBER EXPELLED FOR UNPROFESSIONAL CONDUCT

On November 19, 1999, the AANS Board of Directors approved the recommendation of the Professional Conduct Committee that an Indiana neurosurgeon be expelled from the AANS due to unprofessional conduct while giving testimony in a medical malpractice case.

According to the committee, the patient in the underlying litigation had paralysis and bowel and bladder dysfunction following removal of an intramedullary spinal cord tumor. The plaintiff's expert at trial admitted he had not performed any intramedullary spinal cord tumor surgeries during the previous five years, and that he had never personally operated on a spinal cord intramedullary tumor using SSEPs, although he criticized the defendant surgeon for not having used SSEPs. It also appears that the only published material the plaintiff's expert reviewed prior to testifying was researched and furnished to him by the plaintiff's attorney.

Under the AANS' *Code of Ethics, Expert Witness Guidelines* and the *Position Statement on Testimony in Professional Liability Cases*, subject matter expertise is required of an AANS member giving legal testimony. The committee concluded the member in question violated those standards by testifying with insufficient expertise in this area.

In addition, the member confirmed that he has testified as an advocate for the positions he espouses and does not believe it is appropriate for him to provide jurors with the broad spectrum of neurosurgical thought on the issues presented. The AANS' *Position Statement on Testimony in Professional Liability Cases* and *Expert Witness Guidelines* specifically states that a neurosurgeon should not testify as an advocate and should point out differing viewpoints, if they exist. Since the member's testimony was clearly in violation of those Guidelines, he expressed an intent to continue his practices, and had previously been suspended from the AANS for similar testimony in another case, the Professional Conduct Committee recommended, and the Board agreed, that the member should be expelled.

EVENTS

Calendar of Neurosurgical Events

26th Annual Symposium—Recent Advances in Neurosurgery

March 2-4, 2000
Phoenix, Arizona
(602) 406-3067

Skull Base Surgery 2000

March 17-20, 2000
Scottsdale, Arizona
(301) 654-6802

AANS Annual Meeting

April 8-13, 2000
San Francisco, California
(847) 692-9500

27th Annual Meeting of the International Society for the Study of the Lumbar Spine

April 9-13, 2000
Adelaide, Australia
(416) 480-4833

AANS/CNS Section on Tumors Satellite Symposium

April 13-14, 2000
San Francisco, California
(847) 692-9500

3rd International Congress on the Cerebral Venous System/12th Annual Meeting of Japanese Society for Skull Base Surgery

May 31-June 2, 2000
Matsumoto, Japan
81-263-37-2690

4th Congress of the European Association of Neuro-Oncology

June 3-7, 2000
Copenhagen, Denmark
45-3946-0500

Japan Spine Research Society Annual Meeting

June 8-9, 2000

Nagoya City, Japan
81-562-93-2169

Latin American Congress of Neurosurgery

June 11-16, 2000
Ceara, Brazil
55-85-2485125

Canadian Congress of Neurological Sciences

June 13-17, 2000
Ottawa, Ontario, Canada
(604) 681-5226

17th Congress of the European Society for Pediatric Neurosurgery

June 17-21, 2000
Graz, Austria
43-316-385-2710

Cervical Spine Research Society Meeting

June 21-24, 2000
London, England
00-44-2078298714

35th Annual Meeting of the Rocky Mountain Neurosurgical Society

Jointly Sponsored by the AANS
June 24-28, 2000
Alyeska, Alaska
(702) 382-1960

First Interdisciplinary World Congress on Spinal Surgery

August 27-September 1, 2000
Berlin, Germany
49-30-857903-0

AANS Membership *Continued from page 26*

party payers. This is accomplished through a variety of activities:

- **Public Awareness:** The AANS will soon launch a major public awareness program with the publication of a special neurosurgical insert in *USA Today*. Other projects include a series of prepared newspaper columns on neurosurgical topics, the development of a media awards program for journalists, and the creation of a grassroots spokesperson network and neurosurgical procedures statistic database.

- **Media Relations:** The AANS serves as an informational clearinghouse for the media, providing expert information about neurosurgical practice, arranging interviews with AANS members, developing AANS position statements and news releases and operating a press room at the Annual Meeting.

- **Patient Inquiries:** The AANS provides information to thousands of patients and family members.

- **Organizational Liaisons:** The AANS represents your interests with volunteer liaisons to a number of medical specialty groups, as

well as groups dealing with professional liability, tort reform and clinical practice.

- **Neurosurgical Marketing Exhibit:** To increase awareness of the scope of neurosurgical practice with referring physicians, AANS co-sponsors a special exhibit displayed at the annual scientific meetings of the American Academy of Family Physicians and American College of Physicians/American Society of Internal Medicine.

- **Getting SMART About Neurosurgery:** The AANS jointly developed this successful program to help neurosurgeons respond to the many changes impacting neurosurgical practice, re-establish contact with old or diminishing referral sources and position members as spine and cerebrovascular specialists.

- **NEUROSURGERY://ON-CALL®:** With more than 60,000 visitors per month, N://OC® provides access to everything from organizational information to patient education materials and scientific databases.

AANS: Member Driven

As the largest neurosurgical association ded-

icated to the pursuit of excellence in education, the AANS requires the active involvement of many dedicated volunteers. In a recent AANS leadership survey, the majority of the Board members said they devote 50-120 hours of their time each year to AANS activities. In addition, hundreds of other members spend countless hours to build the important programs described here.

By the same token, we could not accomplish as much as we do without the solid support of our staff. They are focused on membership service and satisfaction, and provide valuable advice and business savvy to keep us on an even keel. The relationship between volunteers and staff makes for a powerful partnership indeed.

Clearly you can see how the AANS is positioned to meet your needs now and in the future. ■

Fremont P. Wirth, MD, is a neurosurgeon in private practice in Savannah, Georgia, and a member of the AANS Board of Directors.

For more information on AANS activities and accomplishments, see the Annual Report on pages 45-52.

Best Practices

North Carolina Spine Center Prides Itself on Quality Service.

Name: University of North Carolina (UNC) Spine Center

Location: University of North Carolina (Chapel Hill Campus)

Number of neurosurgeons: Five

Total number of employees: 885 attending physicians and 545 resident physicians

Number of medical centers served: One with 684 hospital beds

Approximate number of patients cared for per week: 200

Staff structure

UNC Spine Center is a multidisciplinary, hospital-based clinic that is open five days a week. The clinic cares for patients with all types of spinal diseases, from low back pain to spinal cord injuries. We have one fellowship-trained neurosurgeon and one fellowship-trained orthopaedic surgeon, four physiatrists, two anesthesia pain specialists, one rheumatologist, one neuro-psychologist, one nurse practitioner and one physical therapist on staff, all of whom see patients within the Spine Center clinic.

Practice philosophy

We practice evidence-based medicine with an emphasis on patient education. We have an extremely conservative approach to the surgical management of back pain and assume responsibility for all patients referred to us for the management of spinal disorders. We attempt to see patients collaboratively and provide "one-stop shopping" for patients with spinal disease.

Standing apart from the rest

Our clinic is unique in that we employ disease management models for distinct diagnoses of the spine. We use clinical pathways and monitor our success with outcome

measures. More important, we provide education to outlying facilities utilizing the AHEC system. We also have a community-based THINK FIRST prevention program that is implemented from the Spine Center, and are developing a cognitive behavioral program for patients with acute back pain.

Richard M. Toselli, MD, is Medical Director of the UNC Spine Center and an eight-year member of the AANS.



Back office management solution

We have organized a template that allows physicians of different disciplines to see patients collaboratively and efficiently. We also have cross-trained our staff so that our front desk staff and nurses aides can substitute for each other, resulting in an efficient staffing model.

Key to cutting practice expenses

We participated in a national collaborative for the management of acute low back pain that was organized and implemented by the Institute for Healthcare Improvement. At that time, we looked at our utilization of radiological services, including plain film utilization, physical therapy within the first four to six weeks of an episode of acute low back pain, and MRI and myelogram to surgery ratio, as well as the absolute number of myelograms done at the institution. As a result, we have decreased our utilization of radiological services and have maintained the gains that we have established.

Biggest investment in recent years

We recently converted to a five-day-a-week Spine Center clinic with walk-in capability. This represented a substantial institutional commitment. This model is relatively unique within academic medicine and represents a commitment by the physicians to the maintenance of this multidisciplinary clinic, which opened in May of 1995. It also represents a collegial and collaborative approach to patients with spinal disease that allows for better patient integration within the academic health system.

Advice to young neurosurgeons

In today's environment of declining reimbursement there exists a need to increase volume to maintain clinical income. This means that we have to be more efficient in our management of the patients that we service, both from the standpoint of clinical evaluation and diagnosis, as well as surgical outcomes. Disease management and subspecialization, specifically for spinal disease, is a necessity. Having a multidisciplinary approach with colleagues who can help you manage the non-operative component of the spectrum of disease that you see is essential.

One must also be open to the challenges posed by third-party payers and government regulations. By providing good quality, cost-effective care, you can remain competitive in the marketplace and provide a service to the patient population.

Future advances in neurosurgery

Neurosurgery will be technology driven, both in the clinical setting for data collection and in patient education. New advances will occur in operating rooms with the emergence of new techniques for instrumentation and bony fusion. Patient's health status and long-term outcomes from both operative and non-operative treatments for spinal disease are necessary and hopefully will be done by spine surgeons in the future. ■

Strategies for Success

Solving the Neurosurgical Workforce Quandary.

In this issue of the *Bulletin*, we explore the topic of neurosurgical workforce and the impact it has on the current practice and future of neurosurgery. While models for estimating the state of the medical workforce have been developed, problems still exist when attempting to accurately assess workforce needs. Workforce modeling is not a science, despite the mathematical formulae contained in most workforce projections that provide a semblance of science. Furthermore, trending to the future increases the uncertainty of our specialty's needs, as unforeseen variables impacting on neurosurgery inevitably occur. These facts must be enumerated and disseminated if we are to prevent policy analysts from making substantial workforce decisions based on inexact data misperceived as being accurate.

Recognizing that the desire by legislators and policy analysts for data concerning workforce is unlikely to diminish and since no model exists that will, with certainty, predict future workforce needs, it is my personal perspective that we as individual neurosurgeons and AANS members, must take steps to ensure our specialty's workforce remains well positioned in the future. To that end, I propose the following strategies:

1. Participate in all activities pertaining to workforce analysis. Many would speak with conviction that ignoring the whole issue of workforce has worked in the past. However, letting market forces drive workforce is associated with such problems as oversupply, which results in an increase in health care costs and physician dissatisfaction, and undersupply that causes poor access to health care. Participating in sanctioned studies that may lead to more accurate workforce rightsizing

allows for important specialty concerns to be factored into the analyses.

2. Increase every neurosurgeon's competitiveness. To prosper, our specialty must continue to expand its horizons. The call by AANS president, Martin H. Weiss, MD, in the summer 1999 *Bulletin*, to support the

A. John Popp, MD, FACS, Editor of the AANS Bulletin, is Vice President of AANS and the Henry and Sally Schaffer Chair of Surgery at Albany Medical College.



research mission of our society was not the plea of an isolated academician, it was a call to the members of our organization to recognize that research performed by neurosurgeons will result in the discovery of new neurosurgical treatments that will expand our field. Included in research strategies is the use of outcome studies to demonstrate the quality of care provided by neurosurgeons compared to other specialties. Other means of enhancing neurosurgeons' competitiveness include continuing medical education courses sponsored by the AANS, where neurosurgeons can learn about new techniques and new technologies to enhance their practice.

3. Educate students and residents about workforce and socioeconomic issues. Program director and medical student advisors must counsel residents and medical students interested in a career in neurosurgery as to the prevailing climate of practice. While I believe that most students enter

our specialty because of interest in the field, it is our responsibility as educators to apprise our students and trainees about the complexity of the economic environment so that they can make informed decisions about entering the specialty. For neurosurgical residents, it is crucial that training programs educate residents about ways to better prepare oneself for the complexities of the practice environment.

4. Support the AANS. The AANS is more than an organization that has an annual meeting and collects dues. The AANS, as the spokesorganization for neurosurgery, has developed a long-range strategy that enhances neurosurgical practice, education, and research. Thus, the *raison d'être* of our organization is to aid its members in maintaining their competitive edge in a highly competitive environment. While we often speak of the AANS as if it were a monolith, most know that the successful dynamics of the organization are a result of the hard work of our volunteer physician members and the dedication of the AANS National Office staff, under the energetic direction of Dave Fellers, CAE. To maintain the integrity of our specialty in the current competitive socioeconomic environment, your involvement in and support of our organization is of paramount importance. ■

WE WANT TO HEAR FROM YOU

The AANS Bulletin welcomes letters from our readers. If you have a comment, question or concern on this issue, send it to A. John Popp, MD, FACS, Editor, 22 South Washington, Park Ridge, Illinois 60068. Fax us at (847) 692-2589 or e-mail us at info@aans.org.