

ACCELERATING & ADVANCING NEUROSURGICAL SAFETY



2013
ANNUAL REPORT

PRESIDENT'S MESSAGE

CHANGE WITH PURPOSE



I first want to again thank all of you for the tremendous opportunity to serve as your President over the past year. Though the year flew by, it proved quite eventful and, as an organization, we made great strides, culminating with an outstanding Annual Scientific Meeting.

It was my intention to have a different kind of Annual Scientific Meeting, one that included a repetitive theme of patient safety throughout all aspects of the meeting on each and every day. We had outstanding speakers with national reputations, who helped build the patient-safety movement, come and address our audience. I hope all of you were as excited as I was about the talks that were given during those five days down in New Orleans. I want to thank all of those individuals who participated in the scientific program for keeping the patient-safety theme in their sights and as a component of their talks during the presentations.

This year's program also showcased outstanding social events — especially the tremendous Opening Reception, which even the rain was unable to cast a shadow over. For me, however, the personal highlight was to deliver the annual presidential address on my passion for patient safety, review the movement to date and how it has finally made its way into the realm of neurosurgery. I tried to impart the message that it is our sole responsibility to make it as safe as possible for our patients and that, ultimately, we are responsible for delivering high-quality, safe care. We must realize that we can't do this by ourselves and that we must have not only good, supportive people working with us but also systems in place that prevent errors from occurring before they happen. I believe that we are well on our way to achieving our goal to maximize the best outcome for our patients. Once again, I thank all of you for giving me the great opportunity to send that message forward.

“We must realize that we can't do this by ourselves and that we must have not only good, supportive people working with us but also systems in place that prevent errors from occurring before they happen.”

I also was thrilled that we were able to name a new editor-in-chief for our prestigious *Journal of Neurosurgery*, Dr. Jim Rutka. Although there will never be anyone who will replace Dr. John Jane in his role as editor-in-chief, Dr. Rutka, without a doubt, will do an outstanding job imparting his specific imprint on the *Journal* well into the future. We are all very excited about all of his new ideas and we look forward to an extremely successful run with Dr. Rutka as our new editor-in-chief of the JNS.

Another highlight from this past year has to do with our National Neurosurgery Quality Outcomes Database. This effort has been led by Drs. Anthony Asher and Matt McGirt, and they have done a stellar job enrolling more than 40 sites throughout our country as participants in N²QOD. This will ultimately change the face of how we practice by providing national neurosurgical benchmarking data that we can compare our practice and outcomes against — and ultimately help us deliver the optimal care for our patients. I am very impressed at how neurosurgeons around the country have embraced this concept, and although we were far behind other specialties prior to the formation of N²QOD, we have really done a great job embracing it and making it a part of our culture.

Finally, I want to thank Tom Marshall and the magnificent staff at the AANS for being receptive to many new ideas — not only for the Annual Scientific Meeting, but also for other things that came across our plate throughout the year as the leaders of our national organization. Tom was magnificent to work with and I can assure you that there is no better executive director in any organization anywhere in the country. We are certainly fortunate to have him and his very talented staff. I also want to thank Katie Orrico for continuing to lead an excellent effort in public advocacy through our Washington Committee along with its robust leadership. We owe Katie a great deal and I will forever be in awe of her accomplishments.

I look forward to another great year as we turn over a new chapter with Bill Couldwell as our distinguished leader for our national organization. The AANS is the spokes organization for all of neurosurgery and it is recognized as the leader in promoting neurosurgical education as well as public advocacy. I look forward to serving the organization in many ways in the future and I strongly suggest you all do the same to keep this one of our great treasures.

Sincerely,

Mitchel S. Berger, MD, FAANS
2012-2013 AANS President

EXECUTIVE DIRECTOR'S REPORT

Synergy is almost as if a new group collectively agrees to subordinate old scripts and write new ones. — Stephen R. Covey



There is no more apt image — figurative or literal — than a tearing up of old scripts to symbolize the past year for the American Association of Neurological Surgeons.

While the casting aside of even successful templates is the hallmark of most progressive organizations, what made AANS' success over the past year so pervasive was, in fact, both its figurative and literal breaking of established formats and methods.

In the reports, stories and vignettes that follow, you will read how AANS members — working in teams, committees and, in some cases, with other allied groups — brought diverse talents and perspectives from a wide spectrum of expertise to affect innovation through enterprising change.

Although the rising trajectory of AANS' success has been fueled in large part by building improvements on successful initiatives — such as the enhancements over the past three years of the initial device-driven AANS Annual Meeting in 2010 — this year saw example after example of successful programs and services driven by a complete reordering of established protocols.

Nowhere was this more visibly evident than the 2013 Annual Scientific Meeting in New Orleans. AANS 2012-13 President Dr. Mitch Berger, along with his Scientific Program Committee, radically changed the format of the programming template to better showcase his theme of Advancing Patient Safety (see page 14).

By selecting an additional keynote speaker, completely reformatting the Sunday Opening Day, and demanding a synergy between the science, social events, and compelling informative programming where theme and presentations were choreographed to enhance the overall meeting's themes, Dr. Berger presided over one of the most highly rated Annual Scientific Meetings in recent AANS history. Never has an Annual Scientific Meeting's theme been so intrinsically evident in all aspects of the meeting as it was in New Orleans.

The New Orleans meeting was a signature showcase of that strategic mentality of achieving successful improvements by reinventing, but by no means was it the lone example.

The crown jewel of AANS' offerings — its educational programming — continued to expand with innovative topics specifically customized to meet identified needs of specific membership segments.

Just one example of this was the groundbreaking new course offering this year, the *AANS Exit Strategies for Chief/Senior Residents*. Focused on preparing those physicians' needs as they planned for the non-medical business, economic and personal family aspects of establishing their medical careers, the course turned out to be one of the most highly praised new programs offered by AANS.

Significantly noteworthy as well was the completion of a thirty-month process of reassessing, redesigning, and redirecting a new, more dynamically proactive and vibrant foundation for the specialty, culminating with the AANS Board of Directors' approval of the new Bylaws for the renewed Neurosurgery Research and Education Foundation (NREF) this past April.

In the pages of this report you are about to read, you will see the successful results of "subordinating old scripts" and transforming even traditional programs into new formats, whether they were technologically enhanced, social media-driven, or even presented in the established didactic formats.

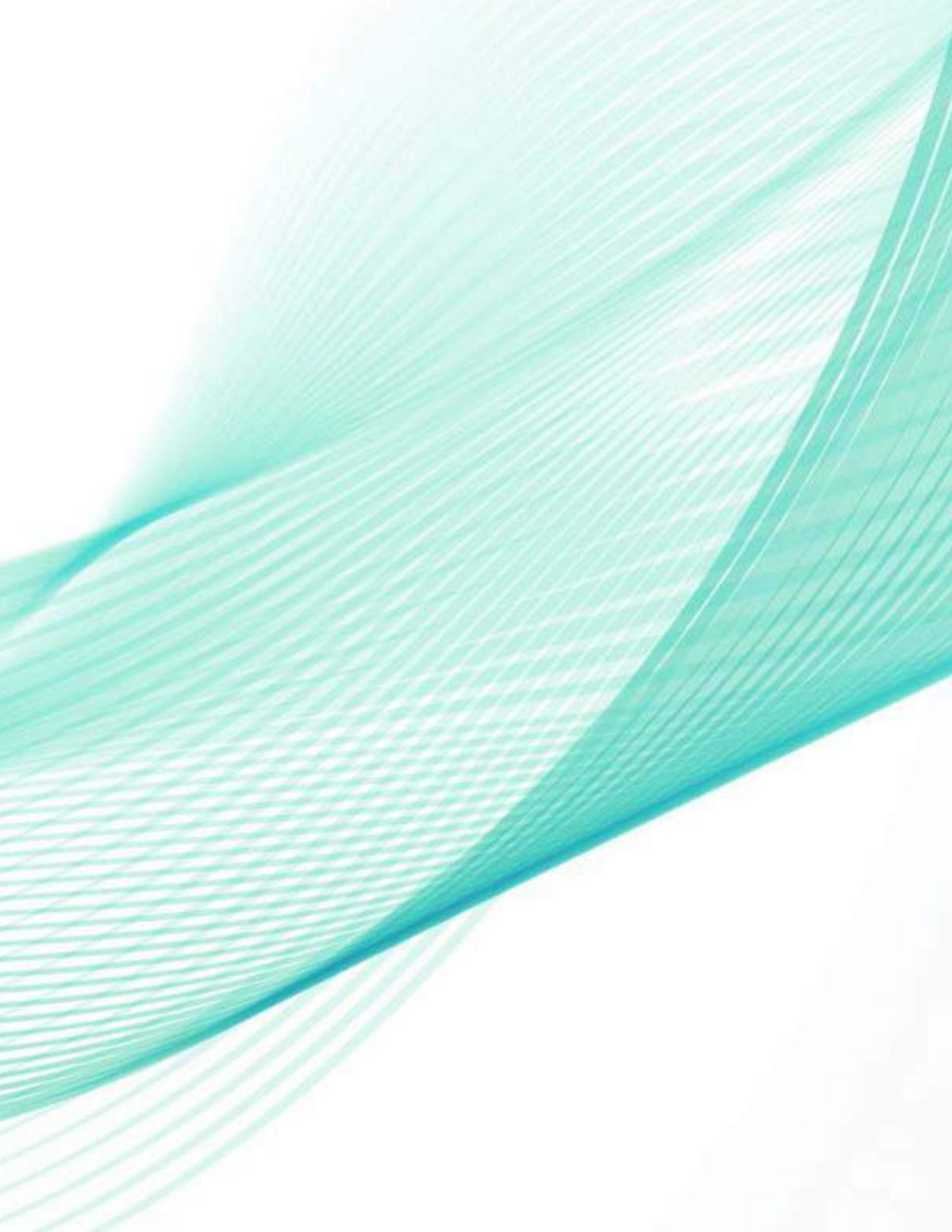
This was far more dynamic than the hollow, rhetorical phrase of "thinking out of the box," or the equally overused and meaningless "creating order out of chaos."

The soaring growth of the AANS over the past several years has been transmuted by an alchemy of limitless perspective, broad experience and diversified skill sets that continue to propel AANS forward with a momentum of achievement.

This report is a tribute to all the individuals who came together with investments of time and commitment to enable AANS to achieve another year of innovative programs and financial stability. I hope you enjoy sharing in the success of your colleagues and your specialty.

As always, thank you for choosing to be a member of the AANS. Your annual choice of AANS to represent your career is our daily mission.

Thomas A. Marshall
AANS Executive Director



ADVANCING AND IMPROVING EDUCATION FOR NEUROSURGEONS AT EVERY LEVEL

Today's neurosurgical practitioners require and demand educational offerings that not only help them stay on the cutting edge of the specialty, but also keep them on top of the ever-changing business of health care. The AANS continues to set the standard in its innovative approach to providing the best continuing medical education (CME) activities for neurosurgeons and other health-care professionals within the specialty. In FY13, the AANS was proud to offer in excess of 100 CME educational activities, providing users with a plethora of CME-accredited courses to help them meet licensure requirements, AANS membership requirements, and Board certification and Maintenance of Certification needs. During FY13, the AANS offered nine directly sponsored CME courses as well as 21 jointly sponsored CME events. In addition, the AANS nearly doubled the number of resident-education courses from the previous fiscal year, hosting some nine resident-education events in FY13 as it innovatively pressed forward with unparalleled neurosurgical educational programming.

During the 2013 fiscal year, the AANS developed new enhancements to its educational sessions that expanded the organization's reach and ability to assist neurosurgeons, neurosurgical office staff and mid-level practitioners with their educational needs; and created a new course for chief/senior residents that supplied practical strategies to help them successfully transition from residency to the real world of neurosurgical practice.



Helping New Neurosurgeons Develop a Strategy

In April 2013, AANS' then President-elect, William T. Couldwell, MD, PhD, FAANS, directed a new course, *Exit Strategies for Chief/Senior Residents*. Focused on providing attendees with real-world insight as they prepared to leave residency and begin the next phase of their neurosurgical career, Dr. Couldwell was intent on providing the finishing resident the benefits of senior experienced neurosurgical input into the choice of practice environment,

“[An] extremely valuable course, [it] fills a much-needed void in resident education, [and is a] fantastic help to residents at a critical stage of their development.” — Simon Hanft, MD, *Exit Strategies for Chief/Senior Residents*

and the business and legal aspects of practice. While there are many fellowships that can teach one how to perfect surgical skills and well-designed programs that can help improve the science, research or writing skills of aspiring clinicians, there is a profound dearth of practical, experienced guidance relevant to the key aspects of choosing a practice and succeeding in one's first “real” job. The AANS was proud to create this course with that in mind, presenting topics that were not traditionally covered by a standard neurosurgical curriculum. These included factors to consider during the job hunt; medical practice issues; evaluating choices between hospital employment vs. small group practice vs. large group practice vs. academia; understanding the medical team environment; certification and MOC; the future of health care; and what those coming into the neurosurgical workforce need to know about malpractice. The course was extremely well received by 21 chief/senior neurosurgery residents and will be offered again in 2014.





A Dynamic Approach to Neurosurgical Learning

In FY13, the AANS continued to reevaluate and build on the success of its educational offerings, using feedback and input from attendees and faculty to reinforce the strongest slate of educational programming available to neurosurgeons, nurses, neurosurgical office staff and mid-level practitioners. A few of the examples include:

Individualized question and answer reports were implemented for ***Neurosurgical Update: Interactive Review by Case Management*** attendees via the audience response system (ARS). This allowed those at the course to create a personalized self-study guide for use in preparing for the MOC exam. The written reports from the ARS resulted in an individualized study guide, which allowed diplomates to see areas of clinical practice they would have to focus on in preparation for the American Board of Neurological Surgery MOC Cognitive Exam. The course, which employs a fast-paced, supportive and interactive format to review a broad range of clinical neurosurgical topics, offers a large number of CME credits in just one weekend by covering more than 100 cases that span the breadth of neurosurgical practice.

AANS also has worked diligently to develop a robust **joint sponsorship program** that allows members to attend some of their favorite courses and meetings while concurrently earning CME credit. Within the framework of the Accreditation Council of Continuing Medical Education's (ACCME's) requirements, ACCME-accredited providers have an opportunity to plan and implement CME activities with organizations not accredited by ACCME. In the case of joint sponsorship activities, it is the ACCME-accredited provider's (in these cases, AANS') responsibility to be able to demonstrate this compliance to the ACCME.

Groups such as the Southern Neurosurgical Society, Society of Neurological Surgeons, American Academy of Neurological Surgery and the joint Sections jointly sponsor their meetings with AANS. AANS makes the accreditation of these meetings possible through a stringent process that includes applications, guidelines, samples and definitions, all of which can be found on the AANS.org website. In FY2013, [the entire set of Joint Sponsorship Guidelines](#) was revamped in an effort to streamline the joint sponsorship process.

Mapping Out a Road to Success for Residents

For the past eight years, the AANS has redefined resident education through its approach to bring the best and brightest minds together. In FY13, the association's nine resident courses educated 247 residents, and AANS has now had nearly 1,100 residents participate in its resident courses since the program was initiated in 2006. These educational opportunities are the result of the tremendous work put forth by outstanding faculty, along with the support and assistance of AANS corporate supporters.

AANS also has continued to invest and promote its innovative Resident Mentoring Program, which gives neurosurgical residents an opportunity to discuss topics such as fellowships, academic versus private practice career options, and work/life balance with someone other than their program director — a mentor who can share their real-life experiences to someone coming into the specialty. Residents take a short survey, the results of which are used to pair the resident with a mentor. From there, the mentor and resident determine how often to communicate, and build a relationship forged in trust as they discuss options and issues. In FY13, the program continued to grow and evolve, with 362 mentors and 242 residents participating. Of note is the fact that 18 mentors are international members — a tremendous resource to international residents who may have unique concerns, issues or questions as they aspire to learn and grow in the field.

“I think this [Mentoring Program] is an absolutely crucial part to the maturation and professional development of young neurosurgeons. I correspond once a month with my mentor and his advice has not only been helpful, but also directly influential on my career path. I think anyone who is willing to, should sign up.” — Brian Gantwerker, MD

Through the drive of the AANS' Education and Practice Management Committee, as well as the backing of the Development Committee, the 2013 fiscal year again featured outstanding partnerships between organized neurosurgery, residents and industry. Courses held over the past fiscal year included the following:

- ***Stereotactic Radiosurgery for Residents***, Aug. 3-5, 2012, NorthShore Evanston Hospital, Evanston, Ill.,
Course Directors: Jason Sheehan, MD, PhD, FAANS; and John Suh, MD
Supporters: Brainlab AG; Medtronic, Inc.; Mevion Medical Systems, Inc.; Accuray Inc.; Elekta AB; Varian Medical Systems, Inc.; and Siemens Corp.
Number of attending residents: 30
- ***Endovascular Techniques for Residents***, Oct. 18-19, 2012, Medical Education & Research Institute (MERI), Memphis
Course Directors: Adam Arthur, MD, MPH, FAANS; and Erol Veznedaroglu, MD, FAANS
Supporters: Covidien; MicroVention, Inc.; Penumbra Inc.; Codman & Shurtleff, Inc.; Siemens Corp; and Methodist University Hospital
Number of attending residents: 24

- **Endovascular Techniques for Fellows**, Oct. 19-21, 2012, MERI, Memphis
Course Directors: Adam Arthur, MD, MPH, FAANS; and Erol Veznedaroglu, MD, FAANS
Supporters: Covidien; MicroVention, Inc.; Penumbra Inc.; Stryker (Neurovascular); Codman & Shurtleff, Inc.; Siemens Corp; and Methodist University Hospital
Number of attending residents: 40
- **Fundamentals in Spine Surgery for Residents**, Nov. 8-10, 2012, Spine Education and Research Center (SERC), Burr Ridge, Ill.
Course Directors: R. Patrick Jacob, MD, FAANS; and Praveen Mummaneni, MD, FAANS
Supporters: Globus Medical Inc.; Medtronic, Inc.; Stryker; K2M, Inc.; Orthofix; and NuVasive, Inc.
Number of attending residents: 40
- **Skull Base for Senior Residents**, Nov. 8-11, 2012, MERI, Memphis
Course Director: Jon Robertson, MD, FAANS
Supporters: Carl Zeiss Meditec, Inc.; Medtronic, Inc.; Stryker; Synthes CMF; and Biomet, Inc.
Number of attending residents: 24
- **Vascular Techniques for Residents**, Nov. 30-Dec. 3, 2012, MERI, Memphis
Course Directors: Adam Arthur, MD, MPH, FAANS; and Michael Lawton, MD, FAANS
Supporters: Leica Microsystems; Carl Zeiss Meditec, Inc.; Medtronic; Siemens Medical Solutions USA, Inc.; Aesculap, Inc. USA; Mizhuo America, Inc.; Synthes Anspach; OsteoMed, Covidien; and Methodist University Hospital
Number of attending residents: 24
- **Pediatric Neurosurgery Review**, March 8-10, 2013, MERI, Memphis
Course Director: Frederick A. Boop, MD, FAANS
Supporters: Medtronic, Inc.; Imris, Inc.; Leica Microsystems; Carl Zeiss Meditec, Inc.; Biomet, Inc. (Microfixation); LeBonheur Children’s Hospital; Synthes CMF; TrueVision Systems, Inc.; and Karl Storz Endoskope
Number of attending residents: 20
- **Spinal Deformity for Senior Residents**, March 22-24, 2013, VISTA (Vitruvian Institute of Surgical Training and Anatomy), Baltimore
Course Director: Robert Heary, MD, FAANS
Supporters: K2M, Inc.; NuVasive, Inc.; DePuy Spine, Inc.; and Misonix, Inc.
Number of attending residents: 24
- **Exit Strategies for Chief Residents**, April 5-6, 2013, Hyatt Rosemont, Rosemont, Ill.
Course Director: William T. Couldwell, MD, PhD, FAANS
Supporters: Leica Microsystems; TrueVision Systems, Inc.; and Stryker Neuro Spine ENT
Number of attending residents: 21

“The faculty prepared a large quantity of highly informative material. [This course is] highly recommended” — Jonathan Riley, MD, *Pediatric Neurosurgery Review*

Accelerating and Advancing Resident Education

Adam Arthur, MD, MPH, FAANS; and Erol Veznedaroglu, MD, FAANS,
Seek Patient Interests Through Resident Training

Staying on the forefront of patient safety requires the next generation of neurosurgeons to have comprehensive proficiencies in the operating room. For Adam Arthur, MD, MPH, FAANS; and Erol Veznedaroglu, MD, FAANS, resident education has a logical end game — ensuring that certain treatments are in the best interest of each patient. As co-directors of the *Endovascular Techniques for Residents* course, the two spearhead the AANS' efforts to equip neurosurgical residents with skills that put them on the leading edge of technology.

“There’s a move toward less invasive surgery in many surgical specialties. Technology and intraoperative imaging and devices have marched at a very rapid pace,” said Dr. Arthur, a neurosurgeon at the Semmes-Murphey Neurologic and Spine Institute and associate professor at the University of Tennessee department of neurosurgery. “The challenge is trying to ensure that a resident gets broad exposure to what’s available.”

Since Jon H. Robertson, MD, FAANS; and Robert H. Rosenwasser, MD, FAANS, developed the course in 2006, it has served as a key addendum to the curricula of numerous residency programs. “It was conceived as a way to allow neurosurgical residents...who may not have been exposed to endovascular [techniques] to get some experience and understanding of what it might be like to incorporate endovascular techniques into their practices,” Dr. Arthur noted. “The AANS residency courses fill an important role in allowing residents to get exposure to thought processes and techniques that they might not otherwise encounter.”

Designed with a multi-disciplinary approach, the course highlights therapies for arteriovenous malformations and aneurysms, stenting, carotid angioplasty and the use of mechanical devices to treat strokes. The agenda soon will expand to include open vascular surgical techniques.

“The AANS residency courses fill an important role in allowing residents to get exposure to thought processes and techniques that they might not otherwise encounter.”

— Adam Arthur, MD, MPH, FAANS



“What we’re doing now, we weren’t doing five years ago,” said Dr. Veznedaroglu of the curriculum’s focus on endovascular technologies. As one of the course’s original instructors, Dr. Veznedaroglu, director of the Capital Institute for Neurosciences in New Jersey and chairman of Capital Health’s department of neurosurgery, has seen its growth. Now in his role as co-director, he sees the course as one of the specialty’s most unique education offerings, citing a passionate faculty among its most valuable features. “Dr. Arthur and I made a pact with ourselves that we wouldn’t do the usual political thing, that none of the faculty would be our friends or influential names who could help us,” shared Dr. Veznedaroglu, stating that he and Dr. Arthur use residents’ evaluations to determine the faculty roster. “We only invite great teachers.”

Another unique aspect of the course is its collaboration with the medical-device industry. Through the help of corporate supporters, participants are trained on the newest devices. Drs. Arthur and Veznedaroglu believe that industry involvement in the course debunks the belief that education and corporate support should be

mutually exclusive entities. “Industry supports courses, but exerts no control over the structure or the agenda of the course,” Dr. Arthur said. “We’re able to stretch education much further with industry support. If they wanted to [develop] their own course and make it more commercially oriented, they can, and they do.” Dr. Veznedaroglu shared similar sentiments, noting that, “Courses, done well, are expensive. These companies send their engineers ... they’re truly teaching, and they know their products better than anybody.”

Drs. Veznedaroglu and Arthur have aligned their training objectives with that of the AANS, with Dr. Arthur noting “The AANS believes that it is important to maintain [various] surgical techniques to offer the best treatment for each individual patient.” Dr. Veznedaroglu added that in planning for the course’s future, his desire is to continue to push the educational envelope. “I hope [the course] becomes a rite of passage for residents interested in endovascular,” he stated. “I hope that we continue to stay on the forefront and get residents and fellows to understand that the new technology is the future of our field.”

*After earning a bachelor’s degree from New York University in 1989, **Dr. Erol Veznedaroglu** obtained his medical degree from the State University of New York at Buffalo and completed his neurosurgical residency at Thomas Jefferson University Hospital, where he directed its division of cerebrovascular and endovascular neurosurgery. Dr. Veznedaroglu has travelled internationally lecturing on topics such as aneurysm, subarachnoid hemorrhage and stroke. A 1998 medical graduate of the University of Virginia, **Dr. Adam Arthur** completed his neurosurgical residency at the University of Utah. In 2002, he graduated Summa Cum Laude from the university’s Masters of Public Health program with a focus on clinical trials methodology. Dr. Arthur, who also serves as the medical director of the neurological intensive care unit at Memphis’ Baptist Memorial Hospital, counts cerebral aneurysms, arteriovenous malformations, and carotid occlusive disease among his clinical and research interests.*

CHANGING NEUROSURGICAL CULTURE AND IMPROVING PATIENT SAFETY

2013 AANS Annual Scientific Meeting Receives More Than 1,000 Abstract Submissions As Importance of Patient Safety Takes Center Stage

As neurosurgeons and those allied to the field made their way to New Orleans' Ernest N. Morial Convention Center for the 2013 AANS Annual Scientific Meeting, they were surrounded at every turn by the theme of the association's 81st annual convention, "Changing Our Culture to Advance Patient Safety." From April 27-May 1, 2013, attendees found the topic of patient safety embedded in every element of the meeting, from educational programs and presentations to the inaugural neurosurgical face-offs discussing some of the field's most poignant topics. And whether the meeting theme was carried in a breakfast seminar or practical clinic, or through the dynamic presidential address of Mitchel S. Berger, MD, FAANS, the impact of the message was the same: organized neurosurgery is leading the way in improving patient safety, and there is so much more that it will do in the future.



The 2013 AANS Annual Scientific Meeting again exemplified why the AANS is the leader in organized neurosurgery. The Scientific Program Committee needed to comb through more than 1,000 abstract submissions — a record number that exceeded 2012's then-record 943 submissions — as 3,207 medical attendees and more than 6,300 Annual Scientific Meeting attendees were treated to a tremendous variety of presentations and information from the event's presenters and speakers.

New Sunday Programming Brings Specialty Together

The Saturday and Sunday programming scheduled on April 27-28, 2013, featured nearly 40 practical clinics, allowing attendees to explore a wide range of topics and gain valuable hands-on experience while learning from some of the specialty's brightest minds and teachers. Sunday also featured a first-ever dedicated plenary session for mid-level practitioners, including three guest speakers and four abstract presentations, as well as addresses from the respective presidents of the American Academy of Neuroscience Nurses and the Association of Neurosurgical Physician Assistants. The session was extremely well received and will be a staple at future AANS Annual Scientific Meetings.

Sunday evening showcased another watershed event for the organization as the first-ever Opening Ceremonies program was held at the New Orleans Theatre. Former CNN chairman/CEO and renowned author Walter Isaacson discussed the innovative approach of Steve Jobs and how it has impacted our society, followed by the presentation of two new awards — the AANS Cushing Award for Technical Excellence and Innovation in Neurosurgery, which was presented to Edward H. Oldfield, MD, FAANS; and the AANS Medal of Courage Award, which was given to former Arizona congresswoman Gabrielle Giffords and accepted by her husband, former NASA astronaut Mark Kelly. Kelly then addressed the packed auditorium, talking about the importance of communication and commitment both to his wife and to her surgeons following her tragic shooting. Giffords' neurosurgeon, G. Michael Lemole Jr., MD, FAANS, then spoke, stressing the importance of patient safety and the role that neurosurgeons play in positively impacting so many lives. The program concluded with a tremendous musical program by the Preservation Hall Jazz Band, followed by a Mardi Gras-style parade to Mardi Gras World, where the evening's Opening Reception was held. Even with the rain that was falling outside, attendees were treated to a unique, engaging and festive kickoff to the educational programming slated for the rest of the week.



An Educational Gathering Unlike Any Other

The 2013 AANS Annual Scientific Meeting plenary sessions began on Monday, April 29, and as was the case in previous years, educational components of the sessions were streamed live around the world via AANS' AANSconnect® professional networking site. All of the electronic poster presentations also were available for review and comment to a global audience through AANSconnect®, and with a record number of submissions, AANS' unique platform allowed for more interaction than ever before at the Annual Scientific Meeting as non-members were allowed temporary access to see the content and share their opinions.

Another new twist to this year's programming was the introduction of nine "Neurosurgical Face-offs," unique one-on-one discussions from leading neurosurgical practitioners who offered opposing points of view on a variety of topics such as clipping vs. coiling aneurysms; open vs. closed lumbar approaches; and Cushing vs. Dandy – who was the neurosurgical pioneer when it came to patient safety. Attendees were able to ask questions following the different debates, share their own opinions and discuss these topics with their colleagues.

The 2013 Annual Scientific Meeting featured a pair of 3D sessions — "Nuances of Cerebrovascular Surgery: An Interactive 3D Video Presentation" and "Nuances of Intracranial Surgery: An Interactive 3D Video Presentation" — that drew interest from a wide range of attendees as moderators and speakers discussed these topics through their in-depth 150-minute presentations on Monday and Tuesday, respectively.

Long-time *Journal of Neurosurgery* Editor John A. Jane Sr., MD, FAANS, also was honored on Monday evening during a special fundraiser for the NREF at the House of Blues. Dr. Jane was remembered by his colleagues and counterparts as a driving force behind the tremendous success of the Journal of Neurosurgery Publishing Group, and the evening featured many stirring tributes, including several laudations from his colleagues at the University of Virginia. It was an amazing evening honoring one of neurosurgery's truly iconic figures.



Advancing and Accelerating Teamwork in the Operating Room

Twyila Lay, NP, MS, Leads the Charge for Educating Mid-level Practitioners



During the 2013 AANS Annual Scientific Meeting in New Orleans, nurse practitioners (NPs) and physician assistants (PAs) attended a plenary session designed exclusively for mid-level neurosurgical staff. Twyila Lay, NP, MS, co-director of the AANS Mid-Level Practitioners course, wanted the session — held for the first-time amid workshops and seminars for attendings and residents — to reflect her beliefs on the role of these team members in the operating room. “The goal of the plenary was to promote [patient] safety and to recognize the work that nurse practitioners and physician assistants are doing in the neurosurgical field,” she said.

The mid-level plenary session at the Annual Scientific Meeting is only the AANS’ most recent foray in lending educational support to NPs and PAs. Since 2010, the popular *From Cranial to Spine: An Overview of Neurosurgical Topics for the Mid-Level Practitioner* course has been addressing what Lay considers a huge need. “We started the course because we found nothing out there to support the needs of NPs and PAs in neurosurgery, nothing that allowed us to talk to peers working within the same field,” Lay said, noting that mid-level training programs are not specialty-focused but offer general preparation instead. “[When the course began,] we were hoping for maybe 30 attendees, but got at least 175 participants every year. The course has even maxed out at 225, and we’ve had to close the doors.”

Soaring interest in the course suggests what some perceive as a cultural shift in how an NP and PA are viewed in the OR. “There are [more than] 3,000-plus combined NPs and PAs working in the field,” Lay says. “There is a lot of literature demonstrating that the use of [mid-level practitioners] on surgical services like neurosurgery improves continuity of care and decreases length of stays...All of those things increase patient satisfaction.”

Lay, who works as an acute care nurse practitioner and neurotrauma program coordinator at the University of California, San Francisco, believes that teamwork is at the heart of patient safety and positive surgical outcomes. “It really takes a team to care for patients...The goal of [the course and Annual Scientific Meeting session] is to provide unified educational opportunities to look at care and to be educated from a multidisciplinary standpoint.”

Membership and involvement in the AANS is another way that NPs and PAs can connect to their colleagues and to the specialty. “This year, we’re doing a huge push to encourage NPs and PAs to become members. We’re increasing awareness, letting people know that [the AANS] is where [they] should come,” noted Lay, who has been active on the AANS Nursing Liaison Education Practice committee, among others. “[We want to show mid-level practitioners] that they are important to the AANS. That goes a long way — just saying ‘Yes, you belong,’ ‘Yes, you have a voice,’ and ‘Yes, you are a part of this parent organization.’ Because [in neurosurgery,] we’re a team. It’s not just the neurosurgeons. It’s a multidisciplinary effort.”

In addition to her role as acute care nurse practitioner, Twyila Lay earned a Bachelor of Science degree from California State University, Long Beach, and a Master’s of Science in Nursing degree from the University of California, San Francisco. In addition to her work for the AANS’ Mid-Level Practitioner courses, Lay has served as the nursing liaison to the National Neurotrauma Society and as a presenter at events by the World Federation of Neurological Surgeons and the American Association of Neuroscience Nurses.

The 2013 AANS Annual Scientific Meeting in Review

- More than 1,000 abstract submissions were received — eclipsing 2012's record-breaking total.
- The inaugural mid-level plenary session was attended by nearly 200 registrants.
- The all-new Opening Ceremonies featured a guest lecture from Walter Isaacson, two new awards, additional guest speakers and a special musical tribute.
- Nine all-new Neurosurgical Face-offs were held during the course of the meeting.
- Eighty-three educational breakfast seminars were held.
- The number of 3D sessions was expanded to two, and two dinner symposia were offered as well.
- Plenary and select general sessions were again streamed live around the world by using AANS' unique *AANSconnect*® portal to broadcast the content to the neurosurgical community.
- Two international symposia took place — the Global Symposium on Safety and Excellence with the European Association of Neurosurgical Societies; and the U.S.-Mexican Neurosurgical Summit.
- A total of 17 general scientific sessions and three plenary sessions were held.
- Nearly 160 oral abstract presentations were given.
- Some 647 electronic poster presentations were displayed.
- The exhibit hall allowed 215 companies from around the globe to interact with attendees.

Recognizing Luminaries Who Have Advanced the Specialty

- **Cushing Medalist** — Jon H. Robertson, MD, FAANS
- **Distinguished Service Award** — Ralph G. Dacey Jr., MD, FAANS
- **Humanitarian Award** — Mark Bernstein, MD, FAANS
- **AANS International Lifetime Recognition Awardee** — Johannes Schramm, MD

Lecturers Underscore Importance of Safety While Embracing Field's Diversity

- **Cushing Orator** — Chelsey B. Sullenberger III
- **The Rhoton Family Lecturer** — Donald Berwick, MD, MPP
- **The Hunt-Wilson Lecturer** — Michael T. Lawton, MD, FAANS
- **The Ronald L. Bittner Lecturer** — Ennio Antonio Chiocca, MD, PhD, FAANS
- **The Richard C. Schenider Lecturer** — Charles L. Branch Jr., MD, FAANS
- **The Theodore Kurze Lecturer** — Johannes Schramm, MD
- **The Louise Eisenhardt Lecturer** — Carolyn M. Clancy, MD
- **The Van Wagenen Lecturer** — Karin M. Muraszko, MD, FAANS



Battling To Be Neurosurgery's Top Gun

For the last eight years during the AANS Annual Scientific Meeting, residents and fellows have tested their surgical talents head-to-head against their peers in the Neurosurgical Top Gun Competition. This program, which again was presented by the Young Neurosurgeons Committee, took place during the final three days of the AANS Annual Scientific Meeting. The 2013 edition in New Orleans included stations for endovascular aneurysm occlusion, lumbar pedicle screw, thoracic deformity and ventriculostomy. Both the AANS and the Young Neurosurgeons Committee would like to thank the following companies for their support of this contest: Codman, a Johnson & Johnson company; DePuy Synthes Spine; Immersive Touch; Leica Microsystems; Medtronic, Inc.; MicroVenture, Inc.; and the University of Florida.

Thanks to their generous corporate support, awards were presented to the Neurosurgical Top Gun and his/her institution, along with the each of the individual station winners. The following well-deserving award winners received these honors:

- **Overall Top Honors (the Neurosurgical Top Gun):** Jonathan Forbes, MD (then-resident); Vanderbilt University Medical Center, Nashville, Tenn. (graduated June 2013)
- **Institutional Top Honors:** Vanderbilt University Medical Center, Nashville, Tenn.
- **Top Honors for the Endovascular Aneurysm Occlusion Station:** Jay Vachhani, MD (resident); University of Illinois College of Medicine at Peoria, Peoria, Ill. (to graduate June 2015)
- **Top Honors for the Lumbar Pedicle Screw Station:** Jonathan Forbes, MD (then-resident); Vanderbilt University Medical Center, Nashville, Tenn. (graduated June 2013)
- **Top Honors for the Thoracic Deformity Station:** Jay Vachhani, MD (resident); University of Illinois College of Medicine at Peoria, Peoria, Ill. (to graduate June 2015)
- **Top Honors for the Ventriculostomy Station:** Doris Wang, MD, PhD (resident); University of California, San Francisco (to graduate June 2017)



Supporters Help AANS Stay Ahead of the Curve

Each year, the AANS prides itself on developing new innovations, educational programming and unique experiences for those attending the AANS Annual Scientific Meeting. In 2013, attendees for the fourth consecutive year had the ability to get the latest meeting news and alerts, information on programs and sessions, presentations, electronic posters and other vital updates via their mobile device. The AANS Annual Scientific Meeting App has transformed the way information is delivered and disseminated, putting thousands of virtual pages of content together in a format that is easy to use and transport. The AANS would like to again thank the following supporters for helping the organization continue to deliver on its promise of innovation and education to those attending the AANS Annual Scientific Meeting.

2013 AANS Annual Scientific Meeting Supporters

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Accelerating and Advancing Legislative Advocacy

Maya Babu, MD, MBA, Juggles Residency with Health-care Reform

When it comes to patient safety, the modus operandi of Maya Babu, MD, MBA, is clear: “Forty or 50 years ago, [the neurosurgeon’s] obligation was to treat patients and families. Our obligation [now] has expanded to us thinking about the system in which they’re getting care and how they’re getting care.”

Currently a fourth-year neurosurgical resident at the Mayo Clinic, Dr. Babu said that a desire to help others led her to medicine; her desire to affect the quality and access of care led her to advocacy. “[A mentor I had in medical school told me] that you need to have a way to influence how [health care] affects lots of people,” she stated, noting that such facets as cost and access are influenced by the system. “For tertiary specialists like neurosurgeons, we have more roadblocks that keep us from seeing patients as easily.”

During a summer internship at the Substance Abuse and Mental Health Services Administration of the U.S. Dept. of Health and Human Services, Dr. Babu realized that a background in management would broaden her understanding of how contractors, service providers and other health-care players were affected by policy decisions. Soon after, she completed a joint MD/MBA at Harvard University.

Among her key legislative focuses are payment models, delivery reform and medical liability. “Medical education funding [also] has been a huge issue,” she noted, citing recent budget cutbacks. “In thinking about how our education system looks, what does it mean about how we’ll deliver care in the future?”

Dr. Babu finds that the support of her program director, co-residents and chairman has been essential to her clinical and legislative efforts. “It’s good to have colleagues who value your involvement...they get it, and they understand the importance of being involved.”

Along with educating policymakers, Dr. Babu finds it imperative to inform her medical colleagues on the importance of legislative advocacy in medicine and on just how simple it can be. “We think of advocacy as this big ordeal. We have to go to Washington, D.C.; we have to lobby and do fundraising. But a lot of the value we can provide [to legislators] has to do with building relationships,” she added. “One of the values we can provide is to be the source of information for our elected officials...we can meet with them and talk to them, tell them to let us know if we can be a resource in any way. This is not necessarily about political ideology, but a human relationship.”

An Eagan, Minn. native, Dr. Maya Babu completed her undergraduate degree at the University of Minnesota, where she studied neuroscience and psychology. In addition to her roles as the chair of the National Resident Committee of the Association of Women Surgeons and service on the Minnesota Medical Association’s board of trustees, Dr. Babu was elected to the board of trustees for the American Medical Association in June 2013.



ACCELERATING THE GROWTH OF A NEUROSURGICAL NETWORKING COMMUNITY

Members, speakers, exhibitors, corporate supporters and meeting attendees all interact with the AANS through our website. Customizing that experience and having the latest news, information and resources available to members 24/7/365 is a key value of the AANS. The password-protected website, [MyAANS](#), offers CME reporting and customized transcripts; the ability to manage speaker invitations; confirm orders, pay invoices or dues; manage committee activities, disclosures and compliance requirements; vote in elections or for bylaw changes; or access archives of information available only to members or committee participants.

The AANS enhanced this resource area by adding a social component — a professional networking area called *AANSconnect*[®]. *AANSconnect*[®] offers a private online community for members, and at any time, AANS members can login online to debate research; submit a case study for public viewing and invite peers and experts to comment; start or comment on discussions of interest; create or join interest groups; and generally connect with other AANS members. All content, cases and other submissions remain private and secure, affording members a unique portal to discuss cases and topics with colleagues from around the world.



For members who are unable to attend the AANS Annual Scientific Meeting (or for those who might have to miss a portion of a plenary session due to other commitments), *AANSconnect*[®] is the platform that allows members to view educational sessions streamed live from the AANS Annual Scientific Meeting, and to engage with presenters and colleagues by posting comments in discussion forums. Recorded presentations from the meeting are also available, allowing for archived study long after the meeting has concluded. This exclusive members-only community also is a means for members to expand their meeting experience by adding colleagues they meet at meetings to their online network, contact presenters or journal article authors to ask questions, and view hundreds of electronic posters archived in knowledge libraries with options to discuss all content in a private community.

AANS members can also use *AANSconnect*[®]'s powerful membership directory to look up colleagues or find a member with expertise in a particular subspecialty of the field. Member profiles offer features that go far beyond the typical directory listing. *AANSconnect*[®] is accessed through MyAANS using the same user name and password. Profiles show subspecialty interests, practice information, educational background and more. Members also can customize privacy and notification settings to their degree of comfort. In addition, once logged in, users can create link lists, mark favorites, rate videos and content — affording members the opportunity to truly customize their online experience.

NEUROPOINT ALLIANCE: IMPROVING PATIENT CARE AND SAFETY THROUGH PRACTICAL SCIENCE

The AANS is dedicated to advancing the specialty of neurological surgery in order to promote the highest quality of patient care. In support of this mission, the AANS, in cooperation with other neurological societies including the Congress of Neurological Surgeons (CNS), Society of Neurological Surgeons (SNS) and the American Board of Neurological Surgery (ABNS), created the NeuroPoint Alliance (NPA) in 2008. NPA is a not-for-profit 501(c)(6) corporation dedicated to the coordination of a variety of national projects involving the acquisition, analysis and reporting of clinical data from neurosurgical practice, using online technologies.



NPA is designed to meet the quality care and research needs of a broad range of health-care stakeholders, including individual practitioners, practice groups, national professional organizations, health-care plans and the biomedical industry. Studies can include randomized trials, registries, post-marketing surveillance of new devices and opinion research. The [NPA's capabilities](#) include outcomes research; universal data reporting requirements for maintenance of certification (MOC), maintenance of licensure (MOL) and the physician quality reporting system (PQRS); and local and national quality-improvement efforts.

NPA, teaming with Outcome/Quintiles, serves as the data collection agency for the ABNS candidate case logs and Maintenance of Certification (MOC) part 4 key case reporting requirements. NPA continues working with the ABNS regarding refinements to its existing MOC program. "We expect that the data services NPA provides for the ABNS will increase in the future as the MOC part 4 process evolves toward an outcomes registry-based process," said NPA President Robert E. Harbaugh, MD, FAANS. "Other opportunities in regard to data collection, storage and feedback for the Society of Neurological Surgeons Portal project are also being considered."

The NPA's most significant initiative in fiscal year 2013 was the National Neurosurgery Quality and Outcomes Database (N²QOD), a prospective clinical registry designed to address the need for high-quality patient outcomes data related to care of patients with neurosurgical disorders. The N²QOD tracks, analyzes and reports on the quality of surgical care for the most common neurosurgical procedures. NPA works with the Vanderbilt Institute for Medicine and Public Health (VIMPH) to manage the collection and analysis of N²QOD data. In 2013, VIMPH began providing preliminary benchmarks and risk-adjusted variables in N²QOD reports to participating centers.

"The N²QOD Lumbar Spine Module is now the largest national spine registry yet created.... [The] N²QOD...will greatly enhance the safety and value of spine care by allowing us to more objectively identify the patients most likely to benefit from specific procedures, and determine the relative effectiveness of a variety of interventions for specific disease states."

— Anthony L. Asher, MD, FAANS

The registry is now a year old. N²QOD formally launched its Lumbar Spine Module on February 22, 2012, in three academic sites. By fiscal-year end, N²QOD had more than 5,000 patients enrolled and by July had more than 1,000,000 independent variables collected across 29 [participating sites](#). At the end of fiscal year 2013, there were 38 contracted sites. NPA also obtained determination from the U.S. Department of Health & Human Services' (HHS) Office for Human Research Protections (OHRP) that N²QOD program activities do not constitute as human subject research and all N²QOD sites are participating with waiver of written informed consent for obtaining patient-reported outcomes.

"The infrastructure of the N²QOD has been designed to greatly expand the number of participating sites over time," says N²QOD Director Anthony L. Asher, MD, FAANS. "The N²QOD Lumbar Spine Module is now the largest national spine registry yet created. Designed for significant scalability, the longitudinal structure of N²QOD allows for the determination of the sustainability of treatment effects. Inclusion of validated patient-reported outcomes

instruments enables the collection and analysis of essential efficacy data not available in the traditional medical record. The collection of numerous patient characteristics allows for accurate and valid risk-adjusted outcomes."

The N²QOD Lumbar Spine Module presented its preliminary data on April 30, 2013, at the AANS Annual Scientific Meeting in New Orleans. Click on the image to the left to view the presentation, titled "National Neurosurgery Quality and Outcomes Database at One Year: Preliminary Data and Progress Report," which also is available on the [NPA website](#).

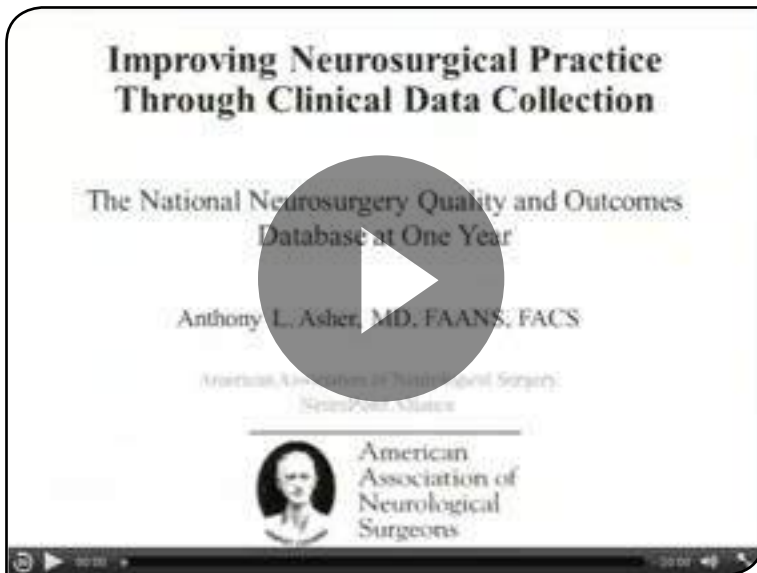
A detailed methodological description of the N²QOD project and justification for the scientific structure of the database as a clinical registry are described as separate papers in the January 2013 issue of Journal of Neurosurgery Publishing Group's *Neurosurgical Focus*, which is dedicated to the "[Science of](#)

[Practice](#)." A detailed Q&A about [spine patient data gathering of the future](#), focused on N²QOD, also was published in *Becker's Spine Review*.

The N²QOD Cervical Spine Module was launched on March 1, 2013. The Cervical Module was activated in 23 clinical sites in fiscal year 2013. Other N²QOD modules in development include Brain Tumor and Cerebrovascular.

In June 2013, the N²QOD became an official Centers for Medicare & Medicaid Services (CMS) 2013 Physician Quality Reporting System (PQRS) approved registry vendor. The N²QOD reports quality data to CMS on behalf of participating physicians through the Perioperative Care Measures Group. PQRS became available to participating N²QOD sites beginning in August 2013.

"The NPA is committed to developing data collection products and services that are needed by neurosurgeons and other specialists, neurosurgical and other professional organizations and our industry partners," noted Dr. Harbaugh. "Our products will be relevant to the broad spectrum of neurosurgical procedures, data reporting requirements and practice types. NPA looks forward to working with all relevant stakeholders to promote a coordinated, national effort to define and develop patient-oriented outcomes, measures and data collection tools to improve the quality, safety, and value of neurosurgical care."



OPENING NEW AVENUES FOR NEUROSURGERY AS THE WORLD OF COMMUNICATION ACCELERATES

Never before has mankind been so interconnected and in communication with one another. The expansion of the Internet and digital communication through smartphones, tablets and laptops means the latest news or information is just a few keystrokes away. And with the proliferation of social media, individuals can share personalized content and stories with friends, colleagues, and counterparts — making it more important than ever before

field of neurosurgery or a member of the public seeking insight into a condition or treatment, you have a trusted source of reliable, unbiased information. To that end, the AANS' myriad media channels serve as neurosurgery's informational beacons, communicating with its members on the latest issues impacting the field while also engaging the public on neurosurgery's importance in relationship to the constantly changing health-care landscape.



During FY2013, [AANS Neurosurgeon](#) continued to take up the mantle as the leading socioeconomic neurosurgical publication. The quarterly online magazine maintained its theme-based issue approach, covering topics such as neurosurgeons working as neurointensivists; neurovascular neurosurgery; humanitarian neurosurgery; and negotiating the neurosurgical learning curve. Peer-reviewed research articles, case studies and surveys, department updates, and AANS news also were presented. In addition, the popular Newsline section offered readers twice-daily updates on the latest research findings, clinical results and more. Plus more than 2,000 individuals following the [AANS Neurosurgeon](#) Twitter feed, [@AANSNeurosurg](#), received tweets about the latest news items published online. The quality of content, breadth of material presented and conversational approach has allowed the publication to significantly increase its readership again in FY13. According to Google Analytics, the publication website saw overall visits rise 141 percent (63,838 visits in FY13 vs. 25,543 in FY12), unique visitors grow by 110 percent (43,047 in FY13 vs. 20,454 in FY12) and pageviews climb by 120 percent (123,758 in FY13 vs. 56,285 in FY12). The number of international readers also is growing: when looking at statistics from Google Analytics, in FY13, the pageviews by the eight largest readership bases outside North America jumped by 307 percent.

Through the use of press releases, outreach to reporters and the development of working partnerships with the media, the AANS, the Journal of Neurosurgery Publishing Group, and other partner organizations helped the organization again secure outstanding media coverage in fiscal year 2013. According to Cision, Inc., reporters affiliated with more than 115 media outlets, including the Associated Press, *The New York Times*, *Financial Times*, *Jerusalem Post*, *Economist*, *Scientific American*, *Science*, *Modern Healthcare*, CBS News Healthwatch, MSN Health, MSNBC News, Yahoo! Health, and National Public Radio, contributed more than 6,630 articles discussing the AANS and its members. This coverage presented the opportunity for the association and the neurosurgical specialty to potentially make hundreds of millions of media impressions. In addition, the AANS received significant return on investment as far as the value it received through its visibility in the media, with the aforementioned articles providing the organization with an estimated advertising value of nearly \$24,611,400 in FY13, according to metrics generated by Cision, Inc.

The AANS' social media efforts continue to raise the profile of both the association and the field of neurosurgery to the public as well as in health-care circles. The [AANS Twitter](#) feed offers the latest association news and helpful neurosurgery-related tips to the public, while the [AANS Neurosurgeon Twitter](#) account feeds research news and information to practitioners, medical students and other health-care professionals — including a large and growing international contingent. The [Journal of Neurosurgery's Twitter](#) feed lets followers get the latest article updates and other related content from the JNS instantly. AANS's [Facebook](#) presence allows for the sharing of useful news and facts on the world's most popular social networking platform, sharing useful patient information tips, news on research findings and other neurosurgical pearls. And [AANS' YouTube Channel](#) offers the most diverse and unique collection of neurosurgical videos on the Web, including the Rhoton Collection 2D and 3D videos, AANS/SNS Neurosurgical Online Sessions, and much more. Nearly 2,900 subscribers follow the channel, and some of the surgical videos have been viewed as many as 15,000 times.

And in FY2013, the AANS overhauled its website, simplifying the navigation tools, consolidating content to make it easier to find, and improving search functionality to allow members better access to articles, content and other information. The updated website also allows visitors to easily interact with all of AANS' social media outlets, gives members easy access to [AANSconnect](#)® from the home page, and allows the organization to highlight the latest news and updates with rotating images that link directly to applicable Web pages. In addition, the AANS continues to update its patient information pages and related content, providing the public, media, and members with a useful, unbiased and current repository of the latest neurosurgical information on conditions and treatments.

The image shows a screenshot of the AANS website homepage. At the top left is the AANS logo featuring a woman's profile. The navigation bar includes links for Home, About AANS, MyAANS, Members, Patient Information, Corporate, Career Center, Media, and Mobile Inquiries. The main banner area features a large blue and white graphic for 'General Meeting Registration Now Open' for the 82nd AANS Annual Scientific Meeting in San Francisco, 2014. To the right of the banner is a section for 'AANSconnect' and 'EXPANDING NEUROSURGERY'. Below the banner is a horizontal menu with categories like Education and Grants, Legislative, AANS/JNOC, Policy, Related Organizations, Young Neurosurgeons, and International. The main content area is divided into several sections: 'What's Happening' with news about the Van Wagenen Fellowship, 'Find a board-certified Neurosurgeon' with a search service, 'AANS Neurosurgeon' with a link to the latest issue of AANS Neurosurgeon, and 'NeuroPoint Alliance' with information about a national clinical data collection. The footer contains links for Patient Information, Education & Meetings, and AANS Publications & Journals.

SUPPORTING THE ADVANCEMENT OF NEUROSURGERY ON A WORLDWIDE SCALE

Tapping the talent of the global neurosurgery community is an important component of strategies to advance neurosurgical safety. Equally, AANS invests in the greater neurosurgical community by providing educational opportunities to neurosurgeons and neurosurgeons in training in under-served countries. This bi-fold approach — learning from experts in other countries, and spreading our knowledge and experience — is the core of AANS international activities.

This year, the AANS presented the AANS International Lifetime Recognition Award to Johannes Schramm, MD. The AANS' most prestigious international award, it recognizes an international neurosurgeon or other international dignitary for his or her lifetime of contributions to advancing the field of neurosurgery in a country outside the U.S. and Canada. Dr. Schramm is the retired chairman of the University of Bonn's Department of Neurosurgery in Bonn, Germany. He has served neurosurgery as president of the German Academy of Neurosurgery and the European Association of Neurological Societies and as the second vice president of the World Federation of Neurological Societies. He has been active in the American Academy of Neurosurgery, the Italian Society of Neurosurgery and the Japan Neurological Society. Dr. Schramm authored or co-authored more than 400 publications and 52 book chapters, and served on the editorial boards of such journals as *World Neurosurgery*, *Epileptic Disorders* and *Advances and Technical Standards in Neurosurgery*, where he eventually acted as editor-in-chief.

AANS Annual Scientific Meeting attendees met Dr. Schramm at the AANS International Reception, held this year at the beautiful Van Benthuyzen-Elms Mansion in New Orleans' Garden District. Also recognized was Yong-Kwang Tu, President Elect of the Word Federation of Neurosurgical Societies.



In addition to the AANS International Lifetime Recognition Award, other AANS International Awards included:

- **Best International Abstract Award:** This honor is awarded to the author of the highest-ranking international abstract submitted to the AANS Annual Scientific Meeting. In 2013 this honor went to **David Roytowski** from Cape Town, South Africa, for his abstract titled *Intracranial Pressure Monitoring as an Early Predictor of Third Ventriculostomy Outcome*.
- **International Travel Scholarship:** This scholarship provides \$1,500 to support the attendance of a neurosurgeon from a developing country to the AANS Annual Scientific Meeting. The 2013 recipient was **Jun Zhong, MD, PhD**, from Shanghai, China, for his abstract titled *The Role of Autonomic Nervous System in the Mechanism of Hemifacial Spasm*.

The AANS also creates fellowship opportunities for neurosurgeons in under-served countries to travel to North America for educational experiences. The 2013 recipients of the AANS International Visiting Surgeon Fellowships were:

- **Vladyslav Buryk, MD, from Kiev, Ukraine.** Dr. Buryk visited Stanford University Medical Center in Stanford, Calif., under the observation of John R. Adler Jr., MD, FAANS. Dr. Buryk gained experience in the radiosurgery treatment of central nervous system diseases (tumors, AVMs and epilepsy). He will share knowledge from his experience through his work with the Ukrainian Neurosurgeons Society, and in his position as associate professor in the Department of Neurosurgery at the National Medical Academy of Post-graduate Academy (Kiev, Ukraine).
- **Juan Bosco Gonzalez Torres, MD, from Masaya, Nicaragua.** Dr. Torres visited Children's Memorial Hermann Hospital in Houston under the observation of David I. Sandberg, MD, FAANS. His main interest is pediatric neurosurgery, with special emphasis on brain tumors, hydrocephalus, defects of neural tube closure and epilepsy.

The AANS also offers a fellowship supporting a post-neurosurgical resident travelling overseas for scientific enrichment, prior to beginning an academic career in neurological surgery. **The William P. Van Wagenen Fellowship** was designed to give freedom in scientific development without the restrictive limitations usually imposed by many research grants and fellowships. Read more about the Van Wagenen Fellowship on page 36 of this Annual Report.

Advancing and Accelerating Head-injury Safety

H. Hunt Batjer, MD, FAANS, Tackles Head-injury Prevention for the National Football League



When the National Football League (NFL) revamped what would become its Head, Neck and Spine Committee in 2010, it summoned H. Hunt Batjer, MD, FAANS, to tackle the widespread issue of concussion and other sports-related injuries among its players. Along with Co-chairman Richard Ellenbogen, MD, FAANS, Dr. Batjer is spearheading the league's efforts to streamline sports safety and make a positive impact in head-injury prevention. "We are working on many fronts to try and make collision sports, like football, as safe as possible, and to equip our players with the best safety equipment possible while preserving the integrity of the sport," he said.

The committee is a medical, athletic and scientific think-tank of sorts, having at its disposal an array of insights from engineers and researchers in addition to involvement from the National Institutes of Health (NIH) and the United States Department of Defense. Included on the committee's agenda is the study of how a football career might affect the brain and spine health of a player later in life. AANS Immediate Past President Mitchel S. Berger, MD, FAANS, oversees a subcommittee pertaining to the issue. By way of a \$30 million research investment, the NFL has partnered with the NIH to assess what Dr. Batjer, chair of neurological surgery at the University of Texas Southwestern Medical Center, called "a very focused problem." Additional subcommittees address topics such as safety equipment and playing rules, advocacy and education, brain and spine injury research, and return-to-play protocols.

The findings of Dr. Batjer and his colleagues have implications that go beyond professional play and into the realm of youth athletics. "This is of high importance to kids and parents," he says, speaking about the devastating effect second-impact syndrome — a potentially catastrophic condition that occurs when the brain suffers a second concussion while it is still recovering from a previous one — can have on a developing brain. "Second-impact syndrome is unique to youth athletes because a brain that is not fully

myelinated does not recover quickly from concussion injury," he says. "[Reinjury of the brain] before it's fully healed can result in subdurals, massive brain swelling and death."

While he observes that head-injury awareness has increased among players of all stripes, Dr. Batjer believes that all neurosurgeons have a responsibility in continuing the conversation in their communities, particularly with young athletes and their parents. "We have the ability to educate them, make them more knowledgeable and more observant," Dr. Batjer says of neurosurgeons who clear student athletes in yearly physicals and during return-to-play assessments on the sidelines. "AANS members are community leaders [who are] asked by organizations in their cities to speak on head injury and concussion safety, topics that are important in the public domain right now. [This is] a great opportunity for the community awareness process."

While informed coaches and athletic trainers are integral to ensuring a player's safety, Dr. Batjer asserts that neurosurgeons are on the starting lineup when imparting knowledge about protecting the head, neck and spine during athletic play. "Neurosurgeons have a unique perspective in taking care of devastating brain injuries; this makes us so aware of the disastrous outcomes that can happen with repetitive head injuries. No one can communicate it better than we can."

Dr. H. Hunt Batjer holds the Lois C.A. and Darwin E. Smith Distinguished Chair in Neurological Surgery at the University of Texas Southwestern (UTSW), where he completed both his medical degree and his residency. Prior to holding his current position, he served as Chairman of Neurological Surgery for the Feinberg School of Medicine at Northwestern University in Chicago for 17 years. In addition to his service in a number of professional societies, Dr. Batjer chairs the Accreditation Council for Graduate Medical Education's Residency Review Committee for Neurological Surgery.

ACCELERATING LEGISLATIVE CHANGE THROUGH PERSUASION AND EDUCATION

Utilizing advocacy, policy development and public relations, the AANS/CNS Washington Committee and Washington Office worked vociferously to defend and protect the ability of neurosurgeons to practice medicine freely, and help to ensure the continued advancement of the specialty of neurological surgery. These efforts have played a fundamental role in a number of health-policy developments, including repealing the Independent Payment Advisory Board (IPAB), pushing for medical-liability reform, advocating for adequate reimbursement and streamlining quality-improvement initiatives. This work is critical, as organized neurosurgery's Washington Office continues to be at the forefront of the health-policy debates and constantly makes it clear to the policymakers and other key influencers in our nation's capital of our core mission: dedication to advancing the specialty of neurological surgery in order to promote the highest quality of patient care and create a system that offers greater value tomorrow than it does today.



Legislative Priorities

Virtually every day that Congress is in session, Washington Office staff are on Capitol Hill advocating on behalf of neurosurgery on several key fronts, including adequate reimbursement, repeal of the IPAB, Pay for Performance (P4P), medical-liability reform, Medicare modernization, emergency call requirements, graduate medical education and surgical innovation. In this role, the AANS interacts frequently with members of Congress, key government entities including the Centers for Medicare & Medicaid Services (CMS), and third-party payers, as well as collaborating with other state and national medical associations.

With the Affordable Care Act (ACA) now the law of the land, the Washington Committee/Washington Office continues to have a prominent voice in shaping key legislative alternatives and repeal efforts relating to the ACA. Organized neurosurgery strongly supports improving our nation's health-care system; however, we firmly believe that the ACA goes far beyond that which is necessary to fix what is broken with the current health-care system. Rather than enacting a carefully targeted set of reforms that would improve access to affordable health insurance, the law fails to address significant problems with the current system, represents an unnecessary expansion of government into the practice of neurosurgery and will ultimately be detrimental to patient access of timely neurosurgical care.

The AANS serves as a co-chair of a coalition to repeal the IPAB, which gives a handful of government bureaucrats sweeping authority over Medicare policy. This 350,000 physician-led effort contributed to the passage of the H.R. 5, the Protecting Access to

Healthcare (PATH) Act, in the House of Representatives in 2012. Momentum for IPAB repeal continues, with the introduction of S.351/H.R. 351, the Protecting Seniors Access to Medicare Act, in early 2013.

Additionally, leading the Health Coalition on Liability and Access, neurosurgery's ongoing efforts to promote medical liability reform led to the passage of the H.R. 5, the Protecting Access to Healthcare (PATH) Act in 2012. The medical liability provisions of the PATH Act are based on California's MICRA, including a \$250,000 cap on non-economic damages, a three-year statute of limitations and contingency-fee reforms.

Finally, it is well known that America has a long tradition of excellence and innovation in patient care, and neurosurgeons have been on the cutting edge of these advancements. To ensure continued forward progress with medical innovations, we have joined the fight to repeal the 2.3 percent excise tax levied on the sales of medical devices. In a major breakthrough, by a margin of 79-20, the Senate passed a bipartisan amendment to the fiscal year 2014 Senate Budget Resolution, calling for the repeal of this irrational tax.

Reimbursement

With an aging population and rising health-care costs, the current Medicare program is on an unsustainable path, and yet again, physicians are on the chopping block. Absent congressional action, physicians face a 27-percent cut in Medicare reimbursement on Jan. 1, 2014. These cuts result from Medicare's flawed sustainable growth rate (SGR) formula and the automatic two-percent budget sequestration cuts. The AANS, through the Washington Committee, is committed to working with Congress to pass a long-term solution to avert these significant cuts and identify innovative approaches for reforming the Medicare payment system. One avenue the AANS is pursuing is to seek passage of legislation that will remove Medicare's balance-billing restrictions and allow patients and physicians to privately contract without penalty. Additionally, organized neurosurgery has been collaborating with a coalition of surgical societies to continue to press Congress to avoid kick-the-can solutions for fixing the physician payment system — and once and for all replace Medicare's SGR formula with a stable mechanism for updating and reimbursing physicians. To that end, Washington Office staff worked with the House Energy and Commerce Health Subcommittee to develop H.R.2810, bipartisan legislation that would repeal the flawed SGR and reform the Medicare physician-payment system.

Organized neurosurgery also has been aggressively challenging other third-party payer coverage policies, which limit reimbursement for many common neurosurgical procedures — particularly in the area of spine and cerebrovascular disease. The Coding and Reimbursement Committee, in consultation with representatives from the Quality Improvement Workgroup, Joint Guidelines Committee, the Joint Sections and Washington Committee, work together to respond to these coverage issues to provide a balanced assessment of the current literature and experience with procedures under review. The Coding and Reimbursement Committee and the appropriate sections have formed "Rapid Response Teams" to help in these efforts, as many payers provide very short comment periods. Materials developed are posted on the AANS website and may be referenced by neurosurgeons as they find useful in their interaction with insurance carriers. It is organized neurosurgery's goal that these efforts will ensure patients get access to the full range of treatment options of innovative neurosurgical care.

Quality Improvement

Due in large part to the advocacy efforts put forth by organized neurosurgery, the Center for Medicare & Medicaid Services (CMS) will allow physicians to satisfy Physician Quality Reporting System (PQRS) requirements by participating in clinical data registries. Per neurosurgery's suggestion, CMS is considering allowing such participation to also satisfy Medicare's Electronic Health Record (EHR) Program's meaningful use requirements. This will allow neurosurgeons to participate in the National Neurosurgery Quality and Outcomes Database (N²QOD) or other similar initiatives. In 2013, the AANS was successful in obtaining CMS approval of N²QOD as a PQRS-certified registry. Neurosurgeons can now satisfy their PQRS requirements and avoid the 2015 penalty by reporting through N²QOD in 2013.

Neurosurgery also continued to strongly advocate for improvements to the ineffective and largely irrelevant quality improvement programs currently mandated by Medicare and other third-party payers. The AANS, through its work with other parties in the Quality Improvement Workgroup, has successfully advocated for changes that will minimize the application of reimbursement penalties, including:

- CMS agreed to delay the start of stage 2 of the EHR program until 2014; and
- CMS has limited the scope of its value-based payment modifier by phasing in practice eligibility. For 2015, CMS has limited it to very large practices. For 2016, it applies to practices of 10 or more physicians, largely eliminating the potential for neurosurgeons to receive even more reductions in their reimbursement.

NeurosurgeryPAC/Grassroots

Organized neurosurgery has established a tried-and-true formula for working inside the Washington Beltway to have an impact on health policy. In FY2013, the AANS actively engaged its members in the political process through grassroots activities, calls to action and participation in NeurosurgeryPAC. As such, neurosurgeons from across the country communicated and met with members of Congress to encourage repeal of the IPAB,



to restructure and better align quality improvement measures, or to advocate for a stable mechanism for reimbursing physicians. Additionally, AANS members attended advocacy conferences such as the Alliance of Specialty Medicine Annual Legislative Conference. Lastly, hundreds of neurosurgeons donated to NeurosurgeryPAC, which in raising more than \$280,000 had its most successful year to date.

Communications Outreach

In addition to its direct lobbying and grassroots advocacy in Washington, D.C., the Washington Committee is garnering support for neurosurgery's health policy positions by carrying out a nationwide earned media campaign, and providing the media with timely information that can be used for their reporting.

Last year, the Washington Office digital media communications platforms — including Neurosurgery Blog, Twitter, Facebook and LinkedIn — reached nearly 4.3 million individual impressions. By using these social media platforms, organized neurosurgery has continued to reach opinion-influencers in the media, on Capitol Hill, and in various health policy circles that wouldn't have been easily achievable through more traditional means. These social media tools include:

- [Neurosurgery Blog: More Than Brain Surgery](#), a Web-based opinion and perspective column, which offers insights and perspective on contemporary health issues as they relate to organized neurosurgery.
- An [@Neurosurgery](#) Twitter feed that is used to gain greater visibility for neurosurgery's advocacy efforts. @Neurosurgery's followers are made up primarily of media, congressional and health policy communities. The Twitter feed focuses primarily on health policy updates and provides links to positive stories about neurosurgery.
- [Facebook](#) and LinkedIn sites that help drive health policy influencers to information on Neurosurgery Blog and the Twitter feed, while also spotlighting newsmaking successes and initiatives for neurosurgical organizations.

In addition to the aforementioned social media efforts, increasing recognition for neurosurgery's advocacy efforts also includes using traditional media tools, and through press releases, letters to the editor, interviews with reporters, and the like, millions of individuals have been reached. Since January 2012, the Washington Office has generated 39 traditional media hits reaching a circulation of nearly 2.5 million. Reaching beyond our specialty, neurosurgeons also serve as spokespersons for several Washington, D.C.-based coalitions, including the Alliance of Specialty Medicine and Partners for Healthy Dialogues. This has allowed organizations such as the AANS to expand its reach well beyond the small specialty of neurosurgery.

ADVANCING NEUROSURGICAL RESEARCH TODAY FOR A BETTER TOMORROW



As a premier funder of neurosurgical studies and education, the Neurosurgery Research and Education Foundation (NREF) provides fellowship funding in basic neuroscience and neurosurgical programs in North America. The NREF is responsible for all aspects of the post-residency clinical fellowship grants program including review and approval of grant applications.

Established in 2009, the Educational Grants Committee (EGC) is composed of AANS member neurosurgeons who do not receive financial or other support from the medical-device industry; these committee members review and approve grant applications in an independent and unbiased manner. Individuals serving on the EGC are volunteers and do not receive compensation from the NREF for their efforts. Corporate supporters of this program have no role in the selection of fellows or training institutions that receive funding.

Post-residency Clinical Fellowships

The NREF works with companies to support high-quality education and training in spine surgery, endovascular neurosurgery, general neurosurgery, and a number of neurosurgical subspecialty areas in an independent and transparent manner. We proudly recognize corporate support for funding of the 2012-2013 post-residency clinical fellowships from the following organizations:

- **Codman & Shurtleff, Inc.,**
a Johnson & Johnson company
- **DePuy Spine Inc.**
- **Lanx, Inc.**
- **Medtronic, Inc.**
- **Zimmer Spine, Inc.**

2012-2013 Awardees

In 2012-2013, the NREF granted funding for 17 post-residency clinical fellowship programs in the areas of spine (12), endovascular (2), pediatric (1), neurocritical care (1) and oncology (1). The Foundation is pleased to announce the following institutions that received funding:

- Barrow Neurological Institute of St. Joseph's Hospital and Medical Center
- Cedars-Sinai Medical Center
- Johns Hopkins University
- Medical College of Wisconsin
- Northwestern University
- Rush University
- The University of Texas MD Anderson Cancer Center
- The University of Utah
- Thomas Jefferson University
- Toronto Western Hospital/ University of Toronto
- University of California, Los Angeles
- University of California, San Francisco
- University of Florida
- University of Miami
- University of Michigan
- University of Virginia - Charlottesville
- University of Wisconsin

ALTERING THE RESEARCH LANDSCAPE FOR TODAY'S NEUROSURGICAL CONTEMPORARIES

The mission of the NREF is to provide a private, non-governmental source of training for research in the neurosciences. Since 1980, more than 200 residents and young clinician investigators have been awarded research grants, and more than 50 institutions have received funding for clinical research. The majority of these award recipients have continued on to careers in these areas, contributing to the field of neurosurgery in their professional careers.

2012-2013 Research Fellows and Young Clinician Investigator Awards (\$40,000 for one year)

NREF Research Fellow

Richard G. Everson, MD — University of California, Los Angeles

Sponsor: Linda M. Liau, MD, PhD, FAANS

Project Title: *Immunosensitization and Adoptive Transfer of NY-ESO-1 TCR Engineered Cells for Treatment of Glioblastoma*

NREF Research Fellow

Heather H. McCrea, MD — Weill Cornell Medical Center

Sponsor: Shahin Rafii, MD

Project Title: *Role of Angiocrine Expression of Notch Ligands in Glioma Progression*

NREF Research Fellow

Adam M. Sonabend, MD — Columbia University Medical Center

Sponsors: Peter Canoll, MD, PhD; and Jeffrey N. Bruce, MD, FAANS

Project Title: *Evolution Following Treatment in Glioblastoma: A Predictable Phenomenon or Pure Chaos*

NREF/Biomet Microfixation Research Fellow

Katharine M. Cronk, MD — Barrow Neurological Institute

Sponsor: Nicholas Theodore, MD, FAANS

Project Title: *Degradable Local Analgesic Devices for Targeted Pain Management and Improved Surgical Success*

NREF/Codman Young Clinician Investigator

Wael F. Asaad, MD, PhD — Alpert Medical School, Brown University

Sponsor: John P. Donoghue, PhD

Project Title: *Programmed Visual-Motor Associations in the Nonhuman Primate*

NREF/Section on Pediatric Neurological Surgery

Fady Girgis, MD — University of Calgary

Sponsor: Emad Eskandar, MD, FAANS

Project Title: *The Roles of the Dorsal Anterior Cingulate Cortex and Ventral Medial Prefrontal Cortex in Fear Conditioning and Extinction in the Non-Human Primate*

NREF/Section on Tumors Research Fellow

Michael Ivan, MD — University of California, San Francisco Neurological Surgery

Sponsor: Andrew T. Parsa, MD, PhD, FAANS

Project Title: *The Role of EMR Proteins in Glioma Pathogenesis*

NREF/Section on Disorders of the Spine and Peripheral Nerves Young Clinician Investigator

Neil Rainer Malhotra, MD — University of Pennsylvania

Sponsor: Dawn M. Elliott, PhD

Project Title: *Novel Bioactive Implants to Reverse Degenerative Disc Disease Via Mechanical Support and Drug Delivery*

NREF/American Academy of Neurological Surgery (AaNS) Research Fellow

Timothy Ryan Owens, MD — Duke University Medical Center

Sponsor: Michael Kelley, MD

Project Title: *Characterization of Transcriptional Targets of Brachyury in Chordoma*

NREF/Cerebrovascular Section Research Fellow

Matthew R. Reynolds, MD — Washington University School of Medicine

Sponsor: Gregory J. Zipfel, MD, FAANS

Project Title: *Examining the Role of Heparin Sulfate Proteoglycans in the Amyloid-Beta-Induced Cerebrovascular Dysfunction of Alzheimer's Disease*

ACCELERATING RESEARCH OPPORTUNITIES, ACCENTUATING NEUROSURGERY

The AANS, through the NREF, is pleased to support the AANS Medical Student Summer Research Fellows. Now in its sixth year, the fellowship program is designed to expose neurosurgical curriculum to first- and second-year medical students — with the hope of piquing their interest in the specialty so that they select neurosurgery when they make their decisions about residency training. The Fellowship is open to medical students in the U.S. or Canada who have completed one or two years of medical school and wish to spend a summer working in a neurosurgical laboratory, mentored by a neurosurgical investigator sponsor who is a member of the AANS. The AANS supports up to twenty awards, with each award totaling \$2,500. The 2013 Fellowship awardees are:

Ali Alam — The University of Texas MD Anderson Cancer Center

Brandyn Castro — University of California, San Francisco

Tyler Cole — Stanford University School of Medicine

Kyle Gabrick — University of Tennessee Health Science Center

Chad Gier — Cleveland Clinic

Emelia Hakes — Phoenix Children's Hospital

Travis Ladner — Vanderbilt University Medical Center

Edward Larkin — University of Pennsylvania

Stephen Miranda — University of Rochester Medical Center

Neel Patel — Dartmouth-Hitchcock Medical Center

Morgan Prust — Massachusetts General Hospital

Ranjodh Singh — Weill Cornell Medical College, New York Presbyterian

Saman Sizardkhani — University of Illinois at Chicago

Timothy Wen — University of Southern California

Joseph Wooley — Johns Hopkins University School of Medicine

Aqib Zehri — Barrow Neurological Institute

Xiaofei (Sophie) Zhou — Case Western Reserve School of Medicine

Jeffrey Zuccato — University of Toronto

2012 Best Abstract Awardee at 2013 AANS Annual Scientific Meeting

Farshad Nassiri — University of Toronto, *Transplantation of neural precursor cells will promote regeneration and repair in the traumatically injured cervical spinal cord*



William P. Van Wagenen Fellowship

The Van Wagenen Fellowship was established by the estate of Dr. William P. Van Wagenen, who was one of the founders of the Harvey Cushing Society (now known as AANS) and its first President. The Fellowship was designed to provide freedom in scientific development without the restrictive limitations usually imposed by many research grants and fellowships.

Awarded annually since 1968, the Van Wagenen Fellowship is offered for post-residency study in a foreign country, for a period of 12 months. The awardee receives a \$120,000 stipend to cover living expenses and other costs, while an additional \$15,000 is awarded to the host university lab or program to help offset research, education and investigation costs for the fellowship.

The recipient of the 2013 Van Wagenen Fellowship was D. Ryan Ormond, MD, who completed his neurosurgical oncology fellowship at Emory University in June 2013. Dr. Ormond will undertake his fellowship in Bonn, Germany, where he will be hosted by the Institute of Reconstructive Neurobiology at the Rheinische Friedrich Wilhelms Universität Bonn under the mentorship of Prof. Dr. Oliver Brustle. Dr. Ormond's research project is titled: *Cell reprogramming: stem cell-based systems for studying nervous system diseases and repair.*

A Circle of Giving That Transcends the Specialty

The NREF Cushing Circle is a cumulative, lifetime and planned giving society for neurosurgeons who support the NREF. The goals of the NREF Cushing Circle include increasing NREF giving (annual, major and planned gifts), creating an organizational identity and building camaraderie among philanthropists who consistently support the NREF. Contributors who have made significant financial commitments to the NREF and the neurosurgical research it supports are eligible to receive benefits, including special invitations to the AANS Annual Scientific Meeting VIP events; advance notification on new products, services and educational offerings; and more.

Criteria for individual membership include:

- Historical giving total of at least \$20,000
- Historical giving total of at least \$10,000 with a pledge of at least \$10,000 within the next five years (at a minimum of \$2,000 per year)
- Historical giving total of at least \$10,000 with a memorandum of understanding for a willed bequest of at least \$50,000

Cushing Circle Donors

The generosity of the Cushing Circle of Giving members has enabled the NREF to ensure the future of the neurosurgical specialty by providing a private, non-governmental source of funding for research and training in the neurosciences. The members of the Cushing Circle of Giving for fiscal year 2013 were:

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Pinnacle Partners Showcase Commitment to Improving Neurosurgery

Support of the Pinnacle Partners in Neurosurgery program is a commitment beyond traditional sponsorships. It is a corporate commitment to support and advance neurosurgery in important areas such as research, education and training. The generous contributions of these partners in programs such as the AANS Resident Education Courses have allowed hundreds of residents to learn from expert faculty on a breadth of topics, including endovascular neurosurgery, spinal deformity, stereotactic radiosurgery and resident exit strategies.

The AANS gratefully acknowledges the following companies for their support of the AANS Pinnacle Partners in Neurosurgery program in fiscal year 2013:

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Brainlab, Inc.	Medtronic, Inc.
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Elekta	Spine Wave, Inc.
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Corporate Leadership Council

The AANS Corporate Leadership Council's mission is to provide a forum for discussion and collaboration between the AANS and its corporate supporters on issues related to neurosurgical education, research, advocacy and patient care. The AANS Corporate Leadership Council convened its annual meeting in July 2012 in Chicago. Representatives from the Pinnacle Partners in Neurosurgery were well represented as 16 participated, joined by members of the AANS Board of Directors and the AANS Development Committee. Topics of discussion included health-care reform and policy, compliance, transparency, evidence-based medicine, and an NREF update.

Action items generated from this meeting included adding additional educational sponsorship opportunities at the AANS Annual Scientific Meeting, changes to the existing Pinnacle Partner benefits, and a request by corporate leaders for a unified, coordinated effort within neurosurgery to communicate sponsorship and support requests to the leadership of the Pinnacle Partner companies.

SUPPORTING RESEARCH OPPORTUNITIES

Donor Support 2012-2013

The Executive Council of the Neurosurgery Research and Education Foundation (NREF) would like to extend its thanks to the more than 748 individuals, groups, medical practices, corporations and members who offered their generous support to the NREF from July 1, 2012, through June 30, 2013. *Denotes NREF Cushing Circle of Giving Member

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 Edie E. Zusman, MD, FAANS

Tributes

The following contributions were made in honor of colleagues, family members and friends:

Edward C. Benzel, MD, FAANS,
*in honor of Daniel K. Resnick, MD, FAANS;
 and Rachel Groman*

Robert C. Abramson, MD, FAANS,
in honor of Griffith R. Harsh III, MD, FAANS(L)

Catherine Anne Mazzola, MD, FAANS,
in honor of Ian F. Pollack, MD, FAANS

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in honor of Richard L. Saunders, MD, FAANS(L)

Philip E. Stieg, MD, PhD, FAANS,
in honor of Russel H. Patterson Jr., MD, FAANS(L)

The Spine Institute of Southern NJ, PC,
in honor of Stanley Rosen

Memorials

The following contributions were made in memory of colleagues, family members and friends:

Albert J. Camma, MD, FAANS(L),
in memory of Anthony Susen

Hiroshi Nakagawa, MD,
in memory of Leonard I. Malis, MD

Ezriel Edward Kornel, MD, FAANS,
in memory of Ella Leffler

Jacques N. Farkas, MD, FAANS,
in memory of Frank Walsh

Donald O. Quest, MD, FAANS(L),
in memory of Ilona M. Quest

Hudson City Savings Bank,
in memory of Ilona M. Quest

Lori E. Summers, MD, FAANS,
in memory of John Berberian, MD

Morris Wade Pulliam, MD, FAANS(L),
in memory of Julian T. Hoff, MD

Ronald I. Apfelbaum, MD, FAANS(L),
in memory of M. Peter Heilbrun, MD

Thomas D. Meek, MD, FAANS(L),
in memory of Pedro Caram, MD

Molly King,
in memory of Robert B. King

Willard Emch, MD, FAANS(L),
in memory of Sharon Emch

Tetsuo Tatsumi, MD,
in memory of Sueko Tatsumi

Morris Wade Pulliam, MD, FAANS(L),
in memory of William Coxe, MD

Corporate Associates

The Corporate Associates Program helps provide support for young researchers working on potential treatments and cures for neurosurgical diseases and conditions that affect millions of people. The NREF would like to thank the following groups that helped support NREF Research Grants and Young Clinician Investigator Awards in fiscal year 2013.

- American Academy of Neurological Surgery
- AANS/CNS Cerebrovascular Section
- AANS/CNS Section on Pediatric Neurological Surgery
- AANS/CNS Section on Tumors
- AANS/CNS Section on Disorders of the Spine and Peripheral Nerves

2013 FINANCIAL SUMMARY

In the 2013 fiscal year, the AANS was able to reduce expenses in several areas while recognizing improvements in other areas and seeing a slightly stronger economy improve investment earnings. Those factors, along with prudent financial planning by the association's leaders and management allowed the AANS to finish FY13 with a profit of \$1,292,918 — marking the 11th time in the past 12 years that the organization concluded the fiscal year with a positive gain. This page highlights some of the examples on how the organization was again able to profitably close out the fiscal year.

This report reflects the combined financial statements of the American Association of Neurological Surgeons and the American Association of Neurosurgeons covering the period of July 1, 2012, through June 30, 2013.



Revenue

The financial gains that the AANS realized in fiscal year 2013 were in strong part to revenue growth in several areas, as the organization looked for new ways to improve both its educational footprint and prepare for possible future programming enhancements.

- The Journal of Neurosurgery Publishing Group again saw an increase in net revenue in FY13, finishing the year up six percent overall compared to FY12. The JNSPG net revenue finished at \$1,631,356.
- In fiscal year 2013, the AANS saw its resident-course revenue rise to \$2,964,132, a jump of nearly five percent from the \$2,823,437 the previous year.
- A strong showing in the financial markets propelled significant investment gains in FY13, as the organization saw its net investment revenues finish at \$641,839, an \$837,532 increase from the previous fiscal year.

The pie chart (page 44) indicates the various income sources. These sources were fairly steady compared to the previous fiscal year, with the most notable increases occurring with products and services and professional development.

Expenses

Overall expenses declined by nearly \$400,000 in FY2013, driven by reduced spending both in the areas of committees and governance. The effective fiscal oversight supplied by the AANS Finance Committee and AANS management allowed the organization to reduce costs while continuing to seek out new opportunities to build value for membership.

- Governance expenses decreased from \$779,767 in FY12 to \$593,210 in FY13, a 24-percent drop, with reduced expenditures from the Board of Directors and Executive Committee having the largest impact.
- The products and services area saw its expenses decline by 28 percent in fiscal year 2013, as reduced exhibit costs, expenditures for the AANS Annual Scientific Meeting video program and survey resulted in a \$115,688 reduction.
- AANS committees and taskforces also decreased their expenses in fiscal year 2013, leading to a reduction of more than \$440,000. The 28-percent drop in expenses between FY12 and FY13 was in large part to reduced expenses by the International Outreach, CME Tracking and Development Committees.

All year-end financial statements of the AANS are audited by outside auditors. Any material differences between a published financial statement and the auditors' report are communicated to AANS members in [AANS Neurosurgeon](#). Copies of the most recent audit are available to members by writing to: AANS Accounting Department, 5550 Meadowbrook Drive, Rolling Meadows, IL 60008-3852.

STATEMENT OF FINANCIAL POSITION 6/30/2013

ASSETS 2012-2013

Cash and Investments.....	\$13,353,660
Other Current Assets	\$663,259
Property and Equipment, net.....	\$3,382,737
Other Assets	\$9,444,947
TOTAL ASSETS.....	\$26,844,603

LIABILITIES AND EQUITY

Liabilities

Accounts Payable	\$7,828,140
Deferred Revenues.....	\$2,729,288
TOTAL LIABILITIES	\$10,557,428

Equity

Beginning Net Assets.....	\$14,994,257
Net Income	\$1,292,918
TOTAL EQUITY	\$16,287,175
TOTAL LIABILITIES AND EQUITY	\$26,844,603

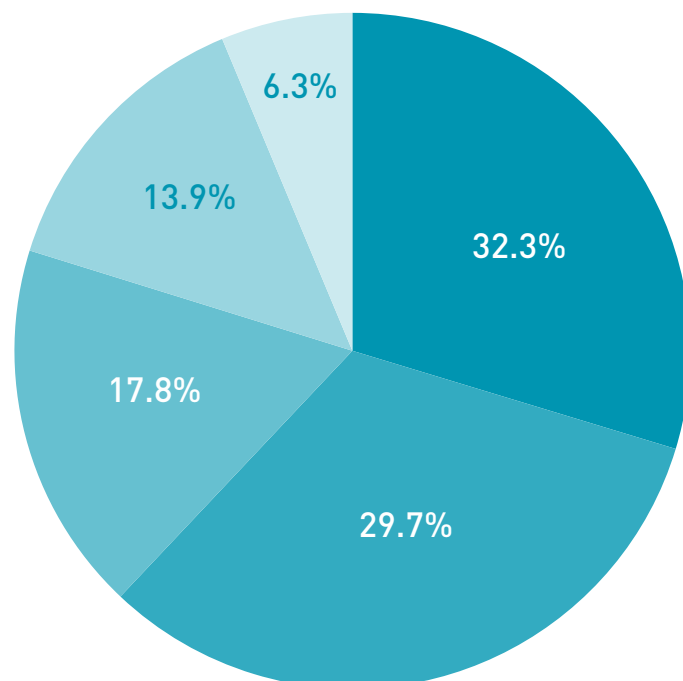
INCOME STATEMENT

Revenue

Operating Revenue	\$16,787,505
Operating Expenses	\$15,494,587
NET OPERATING INCOME (LOSS)	\$1,292,918
Non-Operating Activities.....	-\$641,839
NET INCOME (LOSS)	\$651,079

FY2013 SOURCES OF REVENUE

- Journal of Neurosurgery Publishing Group — 32.3%
- AANS Annual Scientific Meeting — 29.7%
- Dues — 17.8%
- Professional Development — 13.9%
- Products and Services — 6.3%



AANS Mission Statement

The American Association of Neurological Surgeons (AANS) is the organization that speaks for all of neurosurgery. The AANS is dedicated to advancing the specialty of neurosurgery in order to promote the highest quality of patient care.

AANS Vision Statement

- The American Association of Neurological Surgeons will ensure that neurosurgeons are recognized as the preeminent providers of quality care to patients with surgical disorders that affect the nervous system.
 - The American Association of Neurological Surgeons will work to expand the scope of neurosurgical care as new technologies and treatments of neurological disorders become available.
 - The American Association of Neurological Surgeons will be the organization speaking for neurosurgery through its communications and interactions with the public, media, government, medical communities, and third party payers.
 - The American Association of Neurological Surgeons will be its members' principal resource for professional interaction, practice information and education.
 - The American Association of Neurological Surgeons will promote and support appropriate clinical and basic science to expand the scope of neurosurgical practice.
-

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