

# Neurosurgery

MARKET WATCH™

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## Data Driven: QOD Participation Delivering ROI

Utilizing Quality Outcomes Database Data as Marketing Tool Gives Practices an Edge in Evolving Payment Environment

By Bonnie Darves

A North Carolina neurosurgery group that has long enjoyed an enviable market position based on its reputation for high-caliber care is finding that the ability to document that quality with hard numbers and against national benchmarks is proving an effective marketing tool. Carolina Neurosurgery & Spine Associates, in Charlotte, a founding member of the neurosurgery registry Quality Outcomes Database (QOD), has translated its performance data into an asset in its contracting negotiations.

CNSA, a 48-physician group, recently engaged in its first spine bundle with an employer consortium and has achieved

Matthew McGirt, MD, a neurosurgeon with CNSA who has conducted research on quality measurement in neurosurgery. "Once you have data that truly measures safety, effectiveness and patient experience with care, it empowers your group to better position itself in contracting because employers increasingly want to work directly with organizations and health systems."

The ECEN, launched last year in partnership with the longstanding employer cooperative Pacific Business Group on Health, exemplifies this trend and underscores the potential for neurosurgery—with its high-volume, big-ticket spine procedures—to pursue contracts outside the traditional insurance market. A

**"Once you have data that truly measures safety, effectiveness and patient experience with care, it empowers your group to better position itself in contracting."**

— Matthew McGirt, MD, Carolina Neurosurgery & Spine Associates



national Employers Centers of Excellence Network (ECEN) designation. CNSA credits both to a significant extent to its provision of QOD quality and patient-reported outcomes (PRO) data.

"The market is desperately seeking value and to contract with organizations that provide it. Our QOD participation enables us to go to payors and demonstrate our value," said

June 2017 article in the *Harvard Business Review* predicted that value-based healthcare purchasing, which has been slow to roll out, will soon pick up steam because of employers' and government payors' increasing demand for quality and outcomes data.

Neurosurgery's QOD is one of few surgery registry efforts nationally to look at longer-term PROs—some participants are starting to

continued on page 2

**Editor's note:** This article is the second in a two-part series on how neurosurgery as a specialty and forerunning neurosurgery practices are making inroads in quality and outcomes measurement. The first article appeared in the Winter edition.

### IN THIS ISSUE...

Data Driven: QOD Participation Delivering ROI  
PAGE 1

Practice Profile: Riverhills Neuroscience: Sitting Solid in Cincinnati  
PAGE 6

Legal Corner  
PAGE 7

Perspectives: Reflecting on Five Decades in Neurosurgery  
PAGE 8

Exploring Potential Advantages of Rural Neurosurgery Practice  
PAGE 10

Featured Opportunity  
PAGE 10

Neurosurgery Positions  
PAGE 11

Upcoming Events/CMEs  
PAGE 12

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## QOD Participation Delivering ROI

(continued from Page 1)

report three-year outcomes. The lumbar spine module is the largest in the QOD, which counts more than 200 practice sites and 1,400 participating neurosurgeons nationally and has compiled data on more than 70,000 patients. Other modules include cervical spine, spine deformity, and cerebrovascular. A deep brain stimulation (DBS) module is planned.

The QOD positions the specialty well in the changing payment environment, Dr. McGirt and others note, in which the push to demonstrate quality might soon become a shove. “Neurosurgeons should get prepared, I think, because if purchasers start feeling overwhelmingly pressured to start [paying] for value and you’re already doing this, you’ll have an upper hand in the market,” Dr. McGirt said. “Region by region, it’s coming at different paces, but it’s coming.”

**“The entire staff at Semmes Murphey is educated and trained on what we do, and QOD is talked about and supported throughout the organization. That’s the key to being successful with the registry.”**

– Darlene Brewer, QOD coordinator, Semmes Murphey Foundation

For neurosurgery groups that commit to outcomes measurement through registry involvement, the key driver is to determine whether their performance validates that they’re delivering the results that all neurosurgeons seek: safe, effective care that improves patients’ lives not just in the near term but also years down the road. What distinguishes the QOD from other quality-data sources is that it provides validated national benchmark data well beyond complications,

**“QOD has been very good for our specialty too because we’re able to deliver validated data to justify what neurosurgeons do day in and day out.”**

– Kevin Foley, MD, Semmes Murphey



length of stay, 30-day readmissions and 90-day results, to include PROs at one year and beyond. This type of outcomes data has been highly sought but has proved difficult to obtain.

“The QOD enables us to evaluate patient outcomes not only in general but for specific procedures compared to national standards, and it gives us a wealth of data that we haven’t had in the past,” said Eric Elowitz, MD,

patients fare at three months might be markedly different from what they experience and report at one or two years. To date, Cornell has enrolled 830 patients in the lumbar spine module and more than 300 in cervical, and recently started enrolling patients in the spinal deformity module.

“What makes QOD unique is that it looks at patient-reported outcomes. The other databases just look at the 30-day complication rates. Those rates clearly have some merit, but with spine surgery we’re looking for longer term results—at patients’ pain, their activities and their ability to get back to work,” Dr. Elowitz said. “This effort has tremendous importance for spine surgery, particular in evaluating whether the procedures we’re doing are truly benefitting our patients and being able to justify that to the insurers.”

Kevin Foley, MD, chairman at Semmes Murphey Neurologic & Spine Institute in Memphis, Tenn., a founding QOD participant, concurs with Dr. McGirt on the importance of longer-term data for both internal benchmarking purposes and as a demonstrable indicator of overall care quality. Semmes Murphey, like CNSA, has found that there’s definitely a growing demand for data to substantiate its care quality. The group has been “pleasantly surprised,” Dr. Foley reports, by the keen interest in their QOD data at the corporate and hospital level, and among insurance payors.

**PROs matter—for patients and groups**

The longer-term view is particularly important with procedures such as spine fusion, Dr. Elowitz observes, because how



“In dealing with certain payors and with some value-based health initiatives, we’ve been able to show the kinds of outcomes that we can consistently generate,” said Dr. Foley. “That has been very helpful, and it has actually opened several doors for us in terms of pursuing value-based contracts. We’ve been able to take that data and actually expand our market.”

Semmes Murphey has not only expanded its existing contracts and relationships but has also moved into new hospital settings, Dr. Foley noted. “The data is definitely producing positive results for the practice. But at the same time, it’s early—we’re just getting our hands around it,” he said. The group rolled out QOD in lumbar spine in 2012 and cervical spine in 2013, and now has more than 3,500 and 1,600 enrollees in the two modules, respectively. Semmes Murphey is about to start patient enrollment for the cerebrovascular module.

“QOD has been very good for our specialty too because we’re able to deliver validated data to justify what neurosurgeons do day in and day out,” Dr. Foley said. “There’s a lot of meat here—hundreds of thousands of data points collected over multiple years.”

### Internal benefits accrue too

Practices that opted to participate in the QOD and have a few years’ worth of outcomes data are experiencing numerous internal benefits, neurosurgeons in early-adopter groups maintain. “So far, what we’ve been able to glean is really a validation of the things that we’ve been doing for several years,” said Dr. Foley. “That being said, we’re also learning where we can improve. Without benchmarked data, you’re not as guided in your QI as you could be otherwise.”

Having that data, Dr. Foley explained, has prompted the group to focus on 30- and 90-day readmission rates as an area for potential improvement. At the same time, Semmes Murphey’s data confirms that the practice “has compared very favorably nationally on various

continued on page 4

## Outcomes Measurement: Options for Smaller Groups

The Quality Outcomes Database is open to practices of all sizes, and participating sites, while mostly larger groups, also include relatively small neurosurgery practices. The NeuroPoint Alliance, which operates the QOD, is working to make participation less time intensive and costly for all groups and to develop avenues for groups to collaborate and share resources.

The neurosurgeons interviewed for this article offered the following suggestions for practices that might not be able to join QOD but want to begin measuring quality and gathering outcomes data:

**Work with a vendor that offers outcomes tools.** This space is growing rapidly, several sources observed, and it behooves neurosurgery practices to evaluate several options and seek guidance from colleagues who have chosen a vendor. Matthew McGirt, MD, of Carolina Neurosurgery & Spine Associates, said that he and other founding QOD members would be happy to assist. “There are many neurosurgeons with experience in this, so take the opportunity to learn from their mistakes,” he said. (See Resources.)

**Look for collaboration opportunities with hospitals or other groups.** Hospitals and health systems, under their own pressures to demonstrate care quality and value, are increasingly open to partnering with practices and potentially underwriting quality measurement efforts, according to Jonathan Slotkin, MD, director of spinal surgery at Geisinger Neuroscience Institute, a QOD participant. “Private groups that need a coordinator to help obtain patient-reported outcomes might find that hospitals or health systems are willing to support the effort,” Dr. Slotkin said. “It’s important to be proactive and lead the conversation.”

Smaller neurosurgery groups might also consider collaborating with other groups—short of merging—to share the cost burden. “This is something that’s going on out there now,” Dr. Slotkin said, adding that the NPA might be able to help interested groups connect.

**Start small, with a single procedure or service.** Groups that want to start measuring quality and outcomes should choose one procedure to begin, and should proceed gradually, advises Kevin Foley, MD, of Semmes Murphey in Memphis. “For most neurosurgical practices, that’s probably spine,” he said.

“Private groups that need a coordinator to help obtain patient-reported outcomes might find that hospitals or health systems are willing to support the effort.”

– Jonathan Slotkin, MD, Geisinger Neuroscience Institute



## QOD Participation Delivering ROI

(continued from Page 3)

indicators,” he said, such as infection rates, major adverse events, and PROs in pain and quality of life (QOL) improvement. “We can do this because we have a means to compare our outcomes to national outcomes—and it also gives us a target,” he added, when looking at national amalgamated data.

Cornell, in analyzing its QOD one-year data, has discovered that patients undergoing spine fusion procedures report more satisfaction with anterior lumbar fusion than with posterior. The practice has also used the data on pain PROs to guide adjustment of its opiate usage protocols—specifically, moving away from long-acting opiates and using oral pain medication pre-operatively, Dr. Elowitz said.

In the bigger picture, QOD participation has provided Cornell “continued assurance of our quality and patient satisfaction, compared to national norms,” Dr. Elowitz said. “The improved length of stay we’re seeing also justifies our practice’s focus on minimally invasive surgery.”

It’s also been very helpful to have the individual data on Cornell’s five neurosurgeons, he added. “Everyone wants to improve, and peer pressure can be a very motivating force,” Dr. Elowitz said.

Another bonus that all sources mentioned is that most patients are willing to participate as QOD enrollees, and most, Dr. Elowitz observes, understand why registries are beneficial. “Many patients are enthusiastic about sharing their experience. They appear to appreciate knowing that we keep track of quality and are interested in their long-term outcomes,” he said.

“In my experience, very few patients opt out,” Dr. Foley said. “They understand that it’s helping to improve long-term quality.”

### Logistics of QOD participation

The neurosurgeons interviewed for this article and the previous Neurosurgery Market

Watch article on the NeuroPoint Alliance (NPA), which, in concert with AANS and CNS spawned the QOD, agree on one key consideration: Equipping a neurosurgery practice to participate in QOD is no small feat. The QOD requirements are rigorous, and the data-gathering and patient follow-up efforts require a full-time coordinator—and in large practices, possibly additional personnel as well.

“You don’t flip a switch and suddenly start showing quality data,” Dr. McGirt said. “It takes two years to have one-year outcomes on one year of care—and a few years of infrastructure development and learning as you go to do it well and build these processes into your workflow.”

the support of the entire administrative team, from the CEO to the physician champions, and you have to fully comprehend the needs of the registry before you start,” Ms. Brewer said. “The entire staff at Semmes Murphey is educated and trained on what we do, and QOD is talked about and supported throughout the organization. That’s the key to being successful with the registry.”

On the practical side, consistency is critical. The initial patient contact during the enrollment process and the follow-up phone calls at the QOD-specified intervals—that’s Semmes Murphey’s preference, although some groups use electronic means to obtain the patient-reported information—are scripted activities that must be conducted in a highly

**“Many patients are enthusiastic about sharing their experience. They appear to appreciate knowing that we keep track of quality and are interested in their long-term outcomes.”**

— Eric Elowitz, MD, Weill Cornell Medicine Center for Comprehensive Spine Care



At most participating sites, QOD is deemed a QI project and as such does not require informed consent, sources noted. On the logistics side, the NPA has also adopted the REDCap™ (Research Electronic Data Capture) platform to manage data services for the QOD.

Darlene Brewer, the Research Project and Quality Outcomes Manager at Semmes Murphey Foundation who has spearheaded the group’s QOD initiative from the start, stresses the importance of practice-wide understanding of what is a labor-intensive yet gratifying effort. “You really must have

professional manner, Ms. Brewer points out. Further, data collection must be done by the book to ensure that the data isn’t compromised. The QOD’s Practice-based Learning Network, composed of individuals from participating sites, serves as a resource for new sites.

“It’s a very regimented process, and it can be difficult to find the right staff,” said Ms. Brewer. She will participate in a panel discussion on QOD participation at the AANS annual meeting this month and frequently consults with neurosurgery groups that are contemplating QOD involvement. Ideally,



staff members should have familiarity with medical terminology, good computer skills, and above all, Ms. Brewer suggests, excellent people skills. “Everything we do is by phone, so that initial call before surgery is our baseline for our relationship building,” Ms. Brewer explains.

Dr. Elowitz echoes Ms. Brewer’s view on the importance of ensuring the professionalism of staff who interact with QOD enrollees. “The person who calls our patients is representing us, and patients see that individual as someone who is part of our spine team,” he said. He added that QOD personnel must also be well trained in how to handle and redirect any potential clinical-related questions that patients might pose during the follow-up call.

Despite the challenges of QOD participation, the payoff is significant, Ms. Brewer and Dr. Foley maintain. “QOD really has opened the eyes of everyone here—to know that what we’re doing for our patients is improving their quality of life,” Ms. Brewer said. “And because

our data is good, our surgeons are always getting involved in new projects to analyze the data.”

*Ms. Darves, an independent writer based in the Seattle area, is editor of Neurosurgery Market Watch.*

**Resources**

**NeuroPoint Alliance Quality Outcomes Database (QOD)**  
Go to: [www.neuropoint.org/registries/qod-spine/](http://www.neuropoint.org/registries/qod-spine/)

**International Consortium for Health Outcomes Measurement**  
This non-profit organization has developed patient outcomes measurement and reporting standards, lists on its website vendors that provide technology and tools for tracking outcomes. Go to: [techhub.ichom.org](http://techhub.ichom.org)

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## PRACTICE PROFILE

### Riverhills Neuroscience: Sitting Solid in Cincinnati

By Bonnie Darves

In a business and competitive landscape that's reconfiguring itself constantly in an era of mergers, acquisitions and new alliances, the standalone neurosurgery practice—one that's still happily "single" and economically solid—is becoming increasingly rare. Even rarer is the private neurosurgery group that's continuing to grow.

Riverhills Neuroscience, a 25-physician multispecialty group in Greater Cincinnati, is both. The neuroscience center, which offers neurosurgery, neurology, pain management, behavioral science, physical medicine and rehabilitation services, as well as imaging and infusion, under one roof, is also a rarity. Most such centers are operated by health systems or academic institutions.

"We truly are a comprehensive center, so it's pretty much one-stop shopping for neuroscience services. And we've managed to do this without being employed by any health system or hospital," said Christopher Neumann, MD, a Riverhills neurosurgeon.

That independence, in Dr. Neumann's view, in concert with the group's reputation, are key factors that underpin the 30-year-old organization's success. "The physicians are intimately involved in the direction of our group—how it's managed and how it functions—so it's very much a physician-led organization that also benefits from our position in the community," he said, as well as an enviably dedicated staff. Word of mouth, a concept that's almost quaint in many urban markets today when payers largely dictate patient flow, remains Riverhills' primary referral source.

Internally, Riverhills' structure supports the entrepreneurial culture that its founding physicians established. Although all the specialty departments function collegially and cohesively, each retains considerable autonomy in how it

operates. "Each department can make its own decisions about how they want their department to proceed," he said. "If the neurologists decide they want to invest in an ambulatory EEG machine, for instance, it's their decision."

Overall, Riverhills serves seven hospitals, while its neurosurgeons provide services at three facilities. It operates out of a nearly new state-of-the-art facility in suburban Norwood and maintains satellite offices. Riverhills CEO Barb Dechering describes the local market as one that's "still conducive to independent practices" and is characterized by a good payor mix and a favorable economic climate. "There's room to grow and a lot of opportunity here, and we're fortunate to have a good PCP referral base," she said, noting that Riverhills recently brought in a new neurosurgeon and is recruiting.

Neumann said. "Likewise, if I see a patient who doesn't need surgery but might benefit from injections," he adds, he can take him down the hall to a colleague.

"Basically, this allows me to 'curbside consult' physicians who are specialized in multiple sclerosis, movement disorders and pain management, and it's an easy and personal way to work together to try to help our patients," Dr. Neumann said.

The group's growth hasn't diminished its founding culture and deeply rooted patient care philosophy. Both give Riverhills almost a small-practice feel, according to Mary Ellen Eardley, RN, who joined the practice 20 years ago. "For me, personally, it goes back to what one of the neurosurgeons told me long ago—that what's important is to delight the patient, and to make

**"If one of our neurologists comes to my office and says, 'I have a patient who I think might need surgery. Can you see her today?' the answer is yes."**

— Christopher Neumann, MD



#### **Collegial culture, convenient and streamlined care**

From the neurosurgeons' standpoint, the comprehensive services model Riverhills offers not only boosts efficiency internally between disciplines, it also makes care convenient for patients. The group's different specialists make themselves available for and accessible to their colleagues' patients as needed. "If one of our neurologists comes to my office and says, 'I have a patient who I think might need surgery. Can you see her today?' the answer is yes," Dr.

every exchange as meaningful and rewarding as possible," she said. "That has always stuck with me, and it's really what we do here."

For example, every patient who has surgery planned comes in for an hour long "teaching and consent" visit that's devoted almost entirely to education and trying to tease out and address any concerns the patient might have. Patients see videos and models, and their imaging, and are engaged in a detailed discussion about their pathology, and the procedure's associated risks

continued on page 7

## LEGAL CORNER

# Looking at Neurosurgeon Malpractice Stats, and Other Emerging Legal Risks

By Bonnie Darves



Michael  
Sacopulos, JD

In this regular column, Neurosurgery Market Watch speaks with health lawyers about legal issues affecting neurosurgeons. This article, the second in a two-part series, features Michael Sacopulos, JD, a partner in the Terre Haute, Ind., law firm Sacopulos, Johnson & Sacopulos who specializes in physician medical liability and is general counsel for Medical Justice Services. He discusses issues that young neurosurgeons should understand about malpractice lawsuits and other emerging liability areas.

**Q: What should young neurosurgeons understand about the likelihood of a malpractice lawsuit and its implications?**

**A:** The reality is that if you're a neurosurgeon practicing, you will be sued at some point, and probably multiple times over your career. The most recent data we have is from an August 2011 article in *The New England Journal of Medicine*, which found that 19.1% of neurosurgeons face a malpractice claim each year. That's higher than in any other specialty, and neurosurgery is followed by

thoracic-cardiovascular surgeons at 18.9% and general surgeons at 15.3%. The study's authors estimated that 99% of all physicians in high-risk specialties will experience a lawsuit by age 65.

A claim doesn't necessarily mean that you made a mistake or that you will lose the case—the point is that, as unpleasant as it might be, a medical malpractice claim is part of practicing neurosurgery. So the important considerations are understanding your coverage and any caps (limits), the malpractice climate in the state where you practice or are considering, and whether you potentially have any personal risk or exposure in the event of a large [sum] jury verdict.

The other things to keep in mind are that malpractice claims are more frequent in urban settings than in rural ones, and that the more educated patients are, the more likely they are to file a malpractice claim.

**Q: Are there other malpractice policy issues or potential liability risks that neurosurgeons should be aware of?**

**A:** One of the areas where we're seeing a lot of activity is not in the typical malpractice arena but in patient privacy. Sometimes, the policies in place do not cover data breaches. If your practice's EMR system gets hacked,

and your patients' information gets out there, what we're seeing is that the vast majority of physicians and their organizations do not have enough coverage for that.

These situations can involve huge numbers of patients, and many liability policies either have either no coverage or very low limits for this. Many policies have cyber insurance limits of only \$25,000 or \$50,000—and there is zero liability cap on this in any state in the country. Further, plaintiffs' attorneys do not have to go through major hoops to bring these claims, the way they do with malpractice claims.

Neurosurgeons can be named in these claims, because they're responsible for protecting patients' records. If records aren't properly encrypted or the system isn't up to date or, worse, an employee decides to try make extra money by selling patient information on the side, physicians are still on the hook.

In light of all the data breaches occurring, neurosurgeons considering a practice opportunity should ask about the policy in place and make sure that it's appropriate to cover things that might happen. What we're seeing is that the number of physician malpractice claims has been steady or dropping, but cybercrime claims are growing exponentially.

## Practice Profile

(continued from Page 6)

and recovery. "It helps them really prepare for what they're going into and lets them know that we're paying attention to them, individually—that they're not just a diagnosis," she said. "Patients often tell us how much they appreciate this."

Of course, any diagnosis and treatment in the neurological realm is serious business, but Riverhills also maintains what Ms. Eardley

describes as an element of playfulness in its culture, which both the staff and patients appreciate. Every fall, the group's surgeons and staff choose a theme for their holiday card and dress accordingly. One year, the theme was the perennially popular old TV show "M.A.S.H." Another year, it was a biker gathering—the group met at the local Harley Davidson dealership

and the surgeons hopped on Harleys for the photo shoot.

"We've had a lot of fun with these cards over the years. The patients really enjoy them, as do the referring physicians and hospital staff we send them to," she said. "It's wonderful that our surgeons, who are very serious, of course, are also willing to be silly when the occasion permits."

## PERSPECTIVES

### Reflecting on Five Decades in Neurosurgery

By Bonnie Darves



Robert P. Goldfarb, MD

*A conversation with Robert P. Goldfarb, MD, FAANS, founder of Western Neurosurgery Ltd., Tucson, Arizona; and founding Chairman of the Carondelet Neurological Institute at St Joseph's Hospital.*

**Q: In looking back on your 50-plus years in neurosurgery, what do you view as the biggest and most important practice-changing developments the field has seen?**

**A:** The technology advances in the neurosurgical field since I finished my training in 1967 have been unbelievable. In the early 1970s, it was the CT scanner, invented by EMI Company, which incidentally also made the Beatles Records. I actually traveled to England and brought back one of those early scanners. Then the MRI, of course, transformed diagnosis and remains, in my view, the most important development in terms of changing the field. Now we have neuro-navigation and stereotactic radiotherapy, and we're using robotics and artificial intelligence experimentally in neurosurgery.

When you look at what we can do today compared to 50 years ago, it's truly amazing.

**Q: Please describe your career and what have been the most gratifying aspects, personally and professionally**

**A:** Throughout my career, I practiced general neurosurgery and did a lot of pediatrics. I also consulted to athletic teams, so I spent a lot of time treating patients with concussion and traumatic brain injury. I was the CEO and managing partner of Western Neurosurgery from our start in 1980, and I continued doing all the management

functions—including contract negotiations and all those fun things—until 18 months ago.

The reason I stayed in practice all those years—I only retired two years ago at 80—is that I had a very gratifying career. I was fortunate to have great patient satisfaction, and when I would go almost anywhere in Tucson, I often would run into patients or their family members—and they were very grateful. Just a few weeks ago, I was approached in a restaurant by a minister whose wife I treated for a brain tumor 20 years ago. He walked over and said, “You know, I never got to thank you properly.” That happens a lot to me.

I worked very hard, but I also enjoyed it—and I still believe that your practice is what you make of it. It's also important to remember, always, that it's a privilege to do what society allows us to do as neurosurgeons.

**Q: In speaking with neurosurgeons in recent years, I hear a lot of concerns about the financial, regulatory and reimbursement environment in which neurosurgeons practice and that private groups' existence is threatened. What are your views on this?**

**A:** The landscape has changed, of course, with so many neurosurgeons going to hospital employment, but I think that there are still good opportunities in private practice. I think that it's important for neurosurgeons who are entering their final year of training to try to look at and learn about all the different practice settings.

Neurosurgeons can survive and do well in private practice. But today you do need to be in a fairly good-sized group that can provide for the patients you will be seeing—particularly when you're providing call services for hospitals. And it's very helpful to have neurology services in the group. We now actually have a dedicated neuro-hospitalist

who works only in the hospital setting and does all the consults, which is extremely beneficial.

**Q: What do you think are key considerations for young neurosurgeons exploring initial practice opportunities?**

**A:** If you're going into research, you'll look closely at which academic institution offers you a better chance for your research or teaching, and what equipment they have. This kind of due diligence is just as important if you're going to go into private or group practice, or into hospital employment. I really think that you need to make several trips to that practice when you're seriously considering an opportunity.

You need to see the culture that neurosurgeons work under, and how patients are being treated in the hospital. You need to talk to as many neurosurgeons in the group as you can and get their one-on-one perceptions of the practice and of their family life as part of that practice. You should also talk to the practice manager and nurses, and to the office staff. And spend some time in the waiting room to see what that experience is like.

The worst thing you can do is decide which practice to join primarily on a financial basis, because that can be very fleeting. The practice might be purchased or merged a year later, or your employment contract, compensation structure or income might change dramatically after a year or two.

The financial aspect is important, but you need to pick your community and the group on the basis of culture and what your family life will be like—that must be integrated as part of your practice and you need to talk to several neurosurgeons to get a sense of that. Go where you want to live, and remember that your contract is only as good as the people you sign it with.



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The position is open to fully trained neurosurgeons and is under the direction of Dr. Roger Härtl, Professor of Neurosurgery and director of spine surgery at Weill Cornell Medicine, and founder of the Neurosurgical Mission in Tanzania. This position is endorsed by FIENS.

For more information: [weillcornellneurosurgery.org/fellowships](http://weillcornellneurosurgery.org/fellowships)

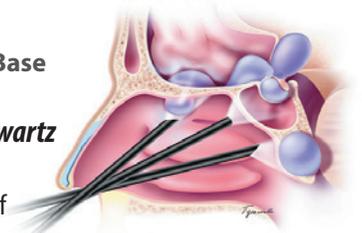
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### Now Recruiting for Multiple Neurosurgical Fellowships

#### ENDOSCOPIC SKULL BASE FELLOWSHIP

This position helps fill the need many neurosurgeons in training have for in-depth exposure to advanced minimally invasive techniques. Fellows will observe cases in the operating room and be involved in research projects including clinical reports and cadaveric dissection in Weill Cornell Medical College's advanced Surgical Innovations Laboratory for Skull Base Microneurosurgery. Fellows are expected to spend a minimum of three months and will receive a stipend that is dependent upon their level of training.

#### OBSERVATIONAL/RESEARCH FELLOWSHIP IN MIS SPINE SURGERY AND NAVIGATION

A three-month non-clinical research fellowship in minimally invasive spinal surgery and navigation, providing an opportunity to observe advanced minimally invasive surgical techniques at Weill Cornell Medicine.

#### FELLOWSHIP IN MINIMALLY INVASIVE AND COMPLEX SPINAL SURGERY AND 3D NAVIGATION

This fellowship complements residency training to expand expertise and skills in the growing and important area of minimally invasive spinal surgery, navigation, and complex spinal surgery.

#### CLINICAL RESEARCH FELLOWSHIP IN SPINE SURGERY

This one- or two-year position offers intensive training in clinical research in minimally invasive spine surgery to a candidate who has completed an accredited residency training program in neurological surgery or orthopedic surgery.

#### COMPLEX SPINE RESEARCH FELLOWSHIP

The fellow will gain expertise in managing a clinical outcomes registry, become proficient in data collection and analysis, and participate in new and existing clinical and biomechanics studies.

#### PEDIATRIC NEUROSURGICAL FELLOWSHIP

This one-year clinical fellowship educates postgraduate neurosurgeons or neurosurgeons in training on the detailed diagnostic and therapeutic options available for children with neurosurgical conditions. The experience in intraventricular endoscopic surgery and transnasal skull base approaches is amongst the busiest worldwide.

#### MEDICAL STUDENT FELLOWSHIP IN PEDIATRIC NEURO-ONCOLOGY RESEARCH

This research fellowship is for students who have completed at least two years of medical college; it requires them to take one year off from their formal academic schedule.

**For more information and  
application instructions, visit  
[weillcornellbrainandspine.org/fellowships](http://weillcornellbrainandspine.org/fellowships)**

## Exploring Potential Advantages of Rural Neurosurgery Practice

By Katie Cole



Most of the neurosurgeons I encounter who are seeking practice opportunities—whether they're residents or fellows leaving training or are experienced neurosurgeons—are looking for jobs in metropolitan areas. Only approximately 10% to 20% of my active candidates express interest in rural practice.

My sense is that most candidates want the cultural amenities and proximity to a major airport that large cities offer and aren't aware that some smaller communities offer reasonable access to such amenities and that, in some cases, there might be advantages and perks that aren't available in major metro areas. As such, young neurosurgeons who are somewhat flexible about their options might benefit from knowing more about rural practice and reaching out to their older colleagues who've decided to pursue their careers in small communities.

Neurosurgeons who've chosen rural practice often point to what they consider a key benefit: more control over and autonomy within their

practice, both in hospitals and in private groups, than they might have in an urban setting. Practice administrators tend to be more available, and physician engagement and participation in setting the direction of the practice is well supported.

Other neurosurgeons cite the fact that it's easier to build their reputation in smaller communities than in large cities because of word of mouth and narrower referral pathways. And many say that they enjoy the opportunity that a tightly knit community affords to follow their patients through their lives and their family's lives.

On the economic and practical front, practicing in smaller communities usually means shorter commutes, more affordable housing, and access to safer, family-centered activities. Schools tend to have smaller class sizes.

Finally, hospitals and practices in rural settings tend to offer more generous financial incentives than urban groups do because it's harder to recruit specialists. That means that neurosurgeons might have more negotiating room in setting the compensation package

terms. In my experience, rural opportunity offers almost always include a high (per national benchmarks) salary, paid call on top of salary, a sign-on bonus and, oftentimes, either education loan repayment assistance or a stipend during the final training period. Some of these financial perks are driven by the widely acknowledged shortage of neurosurgery services in many parts of our country; while the national neurosurgeon-per-population ratio is estimated at 1: 61,000 currently, in some rural areas that ratio is far higher.

From the clinical practice perspective, neurosurgeons who choose rural practice right out of training point to both upsides and potential downsides. Although resources might be more limited in some rural practice settings than in urban ones, neurosurgeons, particularly new graduates, are likely to build their experience in a more condensed time-frame and have access to a wide variety of neurosurgical cases early in their careers.

*Ms. Cole is a Denver resident and publisher of Neurosurgery Market Watch.*

### FEATURED OPPORTUNITY

#### Central Illinois Private Practice Neurosurgery Opportunity

A private practice in Central Illinois is seeking a BE/BC neurosurgeon to join their existing practice. The practice is seeking a general neurosurgeon, and the case mix will be vascular neurosurgery along with general neurosurgery to round out the practice.

Ideally, the practice is looking for a candidate who can specialize in aneurism, and either a fellowship or experience in vascular is preferred. There are currently three active clinical neurosurgeons in the practice, which

is a very well-established private practice and the only private neurosurgery group in the state south of Chicago.

Call will be out of two facilities that are located within seven miles of each other. The practice hopes to bring in a candidate who has one to two years' experience or who is a 2018 resident or fellow. The incoming neurosurgeon will have a two-year guarantee with a 50% bonus in excess of direct overhead. He or she will have the opportunity to collect on cases

once overhead expenses have been met, within the first year.

There is a two-year partnership track and full benefit package including malpractice. The area is a nice area to live that offers abundant year-round recreation including swimming, biking, fishing and golfing. There are good schools, including a solid public school system and good private schools.

## NEUROSURGERY POSITIONS

### GENERAL NEUROSURGERY

Danville, CA: *Private Practice, Cranial Focus*  
 Morgantown, WV: *Academic, Neuro-Oncology/Skull Base*  
 Cincinnati, OH: *Private Practice*  
 Bakersfield, CA: *Private Practice, Ownership into Hospital and Surgery Center*  
 Hattiesburg, MS: *Physician-Owned Clinic*  
 Bloomington, IL: *Private Practice, Vascular*  
 Tampa, FL: *Hospital Employed, Cranial or DBS focus*  
 Tucson, AZ: *Private Practice, Vascular*  
 Kingsport, TN: *Hospital Based Private Practice*  
 Fort Wayne, IN: *Hospital Employed*  
 San Antonio, TX: *Academic, Trauma/Spine*  
 Brooklyn, NY: *Private Practice, Spine/Cranial Trauma*

### PEDIATRIC NEUROSURGERY

Philadelphia, PA: *Private Practice*  
 Tampa, FL: *Hospital Employed*

### ENDOVASCULAR

Charlottesville, VA: *Hospital Employed*  
 Trenton, NJ: *Hospital Employed/Private Practice*  
 Fresno, CA: *Private Practice*  
 Poughkeepsie, NY: *Private Practice/Hospital Employed*  
 Bloomington, IL: *Private Practice-Vascular or Endovascular*  
 Reading, PA: *Hospital Employed*  
 Tucson, AZ: *Private Practice-Vascular or Endovascular*

### SPINE

Long Island, NY: *Private Practice*  
 Martinsburg, WV: *Academic*  
 Dayton, OH: *Private Practice/Hospital Employed*  
 Reno, NV: *Private Practice*  
 Albuquerque, NM: *Academic*  
 Reading, PA: *Hospital Employed*  
 Knoxville, TN: *Hospital Employed*  
 Houston, TX: *Academic*  
 San Antonio, TX: *Academic*

► For more information on these positions, or if you are interested in hiring a neurosurgeon for a permanent position, please contact [info@harlequinna.com](mailto:info@harlequinna.com).



## PACIFIC NEUROSCIENCE INSTITUTE<sup>SM</sup>



**JOHN WAYNE  
CANCER INSTITUTE**  
at Providence Saint John's Health Center

### FELLOWSHIP IN MINIMALLY INVASIVE NEUROSURGERY

The Pacific Neuroscience Institute (PNI) located at Providence Saint John's Health Center in Santa Monica, offers a 1-year fellowship in minimally invasive surgery for brain, pituitary and skull base tumors. This clinical training program is focused on endonasal and keyhole surgical approaches, neuro-endoscopy, pituitary tumor management and multimodality neuro-oncology treatments. The fellowship emphasizes operative and peri-operative patient management as well as translational clinical research. It is integrated with the John Wayne Cancer Institute Surgical Oncology Fellowship.

Qualified applicants must have completed training in an ACGME-accredited neurosurgical residency program and be eligible for a California medical license.

We are currently interviewing for the July 2020 and July 2021 fellowship positions.

For fellowship inquiries, please contact:

Daniel Kelly, MD  
 Director, PNI  
[kellyd@jwci.org](mailto:kellyd@jwci.org)

Garni Barkhoudarian, MD  
 Director, Skull Base and Endoscopic Microdissection Lab  
[barkhoudariang@jwci.org](mailto:barkhoudariang@jwci.org)

Amy A. Eisenberg, MSN, ARNP, CNRN  
 Fellowship Director  
[eisenberga@jwci.org](mailto:eisenberga@jwci.org)

2125 Arizona Avenue, Santa Monica, CA 90404 | [pacificneuro.org](http://pacificneuro.org) | [pacificbraintumor.org](http://pacificbraintumor.org) | [pacificpituitary.org](http://pacificpituitary.org)

Harlequin Recruiting

PO Box 102166

Denver, CO 80250

## UPCOMING U.S. NEUROSURGERY EVENTS/CMES

### AANS Annual Meeting

☐ April 28- May 2

New Orleans, Louisiana

**\*\*\*Meet us there! Booth #1047\*\*\***

### 3rd Annual Common Neurosurgical Conditions in the Pediatric Practice

☐ May 3

New York, New York

### Neurological Trauma Update 2018

☐ May 18

New York, New York

### Advanced Endoscopic Skull Base and Pituitary Surgery

☐ June 1-2

New York, New York

### SNIS: Society of NeuroInterventional Surgery 15th Annual Meeting and Fellows Course

☐ July 23-27

San Francisco, California

### Global Health in Neurosurgery 2018

☐ November 4-5

New York, New York

## UPCOMING INTERNATIONAL CMES

### WLNC: World Live Neurovascular Conference

☐ April 25-27

Kobe, Japan

### Charing Cross Symposium: Acute Stroke Controversies

☐ April 27

London, UK

### 1st Comprehensive Fundamental Neurosurgery CFN Review

☐ May 10-14

Jubail Industrial City, KSA

### ESOC: European Stroke Organization Conference

☐ May 15-18

Gothenburg, Sweden

### ASNR: American Society of Neuroradiology Annual Meeting

☐ June 2-7

Vancouver, Canada

### LINNC: Live Interventional Neuroradiology & Neurosurgery Course

☐ June 11-13

Paris, France

### ESMINT: European Society of Minimally Invasive Neurological Therapy Annual Meeting

☐ September 6-8

Nice, France

### ESNR: European Society of Neuroradiology Annual Meeting

☐ September 19-23

Rotterdam, Netherlands

### The 7th Annual Dandy Meeting

☐ October 12-14

Cabo San Lucas, Mexico