INSIDE

Future of Spinal Fusions
8 Spine Surgeons Weigh In p. 13

Dr. Frank Phillips
The Making of a Minimally Invasive Spine Institute p. 12

Innovation in Spine Technology Post Reform
Q&A With Dr. Dennis Crandall p. 43

Dr. Brian Cole
5 Big Challenges for Orthopedic Surgeons p. 34

INDEX

Table of contents p. 6
Spine p. 8
Pain Management p. 28
Improving Profits p. 34
Executive Brief: Sports Medicine p. 38
Orthopedic & Spine Devices p. 42

ORTHOPEDIC, SPINE & PAIN MANAGEMENT

50 Spine Surgery Practices to Know
Ann Arbor (Mich.) Spine Center. The Ann Arbor Spine Center was established in 2009 to care for patients with spine and neck problems. The center includes MRI, X-ray and injection suite capabilities in close proximity. The center has a relationship with spine specialists from Sport & Spine Physical Therapy. All spine surgeons perform a high volume of surgeries, logging more than 200 cases annually. Common procedures include treatment for scoliosis, artificial disc replacement and continued on page 18

The Most Important Issues Facing Spine Surgeons: Q&A With ISASS President Dr. Steven Garfin

The healthcare landscape has changed drastically over the past decade, especially since the passage of the Patient Protection and Affordable Care Act seeking to increase quality while lowering the cost of healthcare in the United States. Here, Steven Garfin, MD, chairman of the department of orthopedic surgery at UC San Diego and president of the International Society for the Advancement of Spine Surgery, discusses the biggest challenges for spine surgeons and where the field is headed in the future.

Q: What do you consider the most important issues facing spine surgeons today?

Dr. Steven Garfin: To me, the three most important issues facing spine surgeons today are: patient access to care, new technology development and understanding axial pains.

continued on page 10

10 Steps to Negotiate Smart Bundled Payment for Orthopedic Surgery

By Laura Miller

Hoag Orthopaedic Institute began doing bundled payments in 2008 with patients traveling from around the country for their orthopedic services. Most of these patients were employees of large, self-insured companies who were seeking elective procedures. James Caillouette, MD, an orthopedic surgeon with Newport Orthopedic Institute and Hoag Orthopaedic Institute in Irvine, Calif., participated in the coordination of those programs and more recently sat on the advisory board for the Integrated Healthcare Association’s pilot project for bundled payment in California. The programs he has been involved in include several different payors — the Blues, Cigna and Aetna — and recently an agreement was announced between Hoag Orthopaedic Institute, Aetna and technology giant McKesson for bundling knee and hip replacements.

continued on page 33
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FEATURES

1. 50 Spine Surgery Practices to Know
2. The Most Important Issues Facing Spine Surgeons: Q&A With ISASS President Dr. Steven Garfin
3. 10 Steps to Negotiate Smart Bundled Payment for Orthopedic Surgery
7. Publisher’s Letter

Spine
8. 6 Steps to Prepare for the Future of Outpatient Spine Surgery
12. The Making of a Minimally Invasive Spine Institute: Q&A With Dr. Frank Phillips of Midwest Orthopaedics at Rush
13. 8 Spine Surgeons on the Future of Spinal Fusions
14. 7 Steps for Spine Surgeons to Avoid Commoditization
16. Funding the Future of Spine Research: Q&A With Dr. Charles Branch & Dr. James Heckman of Collaborative Spine Research Foundation
17. 12 Spine Surgeon Recognitions
25. 5 Thoughts for Spine Surgeons on Migrating Cases to ASCs

Pain Management
30. 4 Steps to Greater Collaboration Between Pain Management & Primary Care
31. 10 Benchmarking Statistics About ASC Pain Management Revenue

Improving Profits
32. Dr. Brian Cole: 5 Big Challenges for Orthopedic Surgeons Today
35. 22 Spine-Driven Ambulatory Surgery Centers
37. 5 Points on Orthopedic Surgeon Income & Payment Models
37. 15 Statistics on Orthopedic Surgeon Compensation in 2011

Executive Brief: Sports Medicine
38. 8 Points on Teleradiology for Sports Medicine
41. Contact Sports: “You Should Have Your Head Examined”
41. Global Teleradiology Market to Grow 19.3% to 2015

Orthopedic & Spine Devices
42. 10 Steps for Spine Surgeons to Negotiate Best Vendor Contracts
43. Innovation in Spine Technology Post Healthcare Reform: Q&A With Dr. Dennis Crandall
45. Where the Spine Technology Market is Headed: Q&A With K2M CEO Eric Major
46. 10 Milestones for Spine Devices & Implants
47. 25 Orthopedic Surgeons on the Move
47. Advertising Index
We hope you enjoy this issue of Becker’s Orthopedic, Spine & Pain Management Review. This issue features expertise of some of the nation’s leading spine, orthopedic and pain management physicians. This issue includes several feature articles, such as:

1. The Most Important Issues Facing Spine Surgeons: Q&A With ISASS President Dr. Steven Garfin — In this interview, Dr. Steven Garfin discusses some of the biggest challenges spine surgeons face today, including declining reimbursement and advancing surgical instrumentation and technique. He also touches on the goals of the International Society for the Advancement of Spine Surgery and the organization’s global advocacy efforts.

2. 50 Spine Practices to Know — This is a list of independent spine practices from around the country. The practices include multiple spine surgeons and specialists and many have onsite ancillary services. Partners at these practices are often leaders among their peers in spine surgery, team physicians for professional athletes and on the forefront of spine research and innovation. This issue also includes a list of 50 spine-driven ambulatory surgery centers where spine surgeons routinely perform outpatient cases.

3. Dr. Brian Cole: 5 Big Challenges for Orthopedic Surgeons Today — Brian Cole, MD, head of the Cartilage Restoration Center at Rush in Chicago, offers his expertise on industry challenges for orthopedic surgeons. In this article, he touches on orthopedic surgeon employment by hospitals, developing evidence-based guidelines for orthopedic care and consolidation within the healthcare space.

4. 8 Spine Surgeons on the Future of Spinal Fusions — Eight spine surgeon leaders, including Hyun Bae, MD, Robert Watkins Jr., MD, Dennis Crandall, MD, Jeffrey Cantor, MD, Robert J. Banco, MD, Jaideep Chunduri, MD, Stephen T. Onesti, MD, and Sheeraz Qureshi, MD, talk about the recent trend in spinal fusions and where the procedure is headed in the future.

5. 6 Steps to Prepare for the Future of Outpatient Spine Surgery — In this article, Dr. Robert S. Bray outlines how spine surgeons and ambulatory surgery centers can integrate outpatient spine surgery into their practice and facility. Dr. Bray successfully runs two outpatient surgery centers where surgeons perform complex orthopedic and spine procedures on an outpatient basis. This issue also features “5 Thoughts for Spine Surgeons on Migrating Cases to ASCs” which provides specific guidance for surgeons on the business side of performing cases in an ASC.

This issue also includes information about the 19th Annual Ambulatory Surgery Centers-Improving Profitability and Business and Legal Issues Conference, which will be held Oct. 25-27 in Chicago. We will have 91 sessions and 138 great speakers, including keynote speakers Tony LaRussa, Howard Dean and Ari Fleischer. Howard Dean and Ari Fleischer will debate healthcare and the elections. Keynote panels will be moderated by Suzy Welch.

Should you have any questions or comments, please contact myself at sbecker@beckershealthcare.com or editor-in-chief Laura Miller at lmiller@beckershealthcare.com.

Very truly yours,

Scott Becker

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6 Steps to Prepare for the Future of Outpatient Spine Surgery

By Laura Miller

Robert S. Bray, Jr., MD, neurosurgeon and CEO of DISC Sports & Spine Center in Marina del Rey, Calif., believes that outpatient surgery centers and spine specialty hospitals are the future of elective spine surgery. He moved out of his role as head of the Cedars-Sinai Spine Center in Los Angeles to open his own practice, and has since developed two surgery centers where surgeons perform complex minimally invasive orthopedic and spine cases.

“I believe very firmly that spine over the next five to seven years — ten years max — will transition nearly completely to specialty hospitals or outpatient centers,” says Dr. Bray. “The reason I believe we can do this is because procedures are much less invasive today than they were even 10 years ago.”

In addition to the technology, several factors — including an emphasis on providing cost-effective and infection-free care — will drive further growth of spine procedures into the surgery center and specialty hospital setting. Here, Dr. Bray discusses six ways surgeons and surgery centers can prepare for this future.

1. Create a rational business plan. Planning is an important part of every business venture, and surgery centers are no different. If a group of physicians wants to develop a center, they must have a detailed plan — not just deep pockets — to make the venture successful.

“The future is in surgery centers and specialty hospitals, so it’s important to rationally and reasonably develop a business plan, budget and commitment to the center,” says Dr. Bray. “Centers were we perform high acuity cases aren’t little surgery centers where you perform 10 minute procedures; they must be designed and developed well to meet the needs of your patients.”

Equipping a high end, high scale surgery center with the appropriate infection control measures and surgical equipment is a costly endeavor. Dr. Bray estimates it may take around a $9 million investment for a new spine surgery center, but having a savvy business plan could mean partners recoup those costs quickly through solid contracts.

“Put your business concepts together so the surgery center can survive as a business,” says Dr. Bray. “If you can make the center survive as a business, it will flourish and have a purpose. Our center is financially solid; we have never had a non-profitable month and we are growing at an alarming rate.”

2. Hire a high-quality administrator. While physician owners may be able to cut costs in several areas of their surgery center, skimping on administrator salary isn’t acceptable. “You can’t do this without a really top quality administrator,” says Dr. Bray. “I’m the CEO of the center, but my administrator can answer any questions you have about the center. If you are going to run high acuity cases and run them with good outcomes, you need that type of person on your side.”

Karen Reiter, administrator of DISC, had 27 years of experience in the healthcare industry — including time running an implant company — before taking her current position. DISC recently expanded to open a new surgery center in Newport, and Ms. Reiter was able to lead those efforts and achieve accreditation without any deficiencies.

“The detail it takes to run these places is immense,” says Dr. Bray. “They are complex buildings with a high level of professionals working inside. You must have good surgeons and nurses to work with the patients, but that doesn’t matter if you don’t have a quality administrator to take care of everything else.”

Your administrator should be proficient in business, but also understand the healthcare environment. Healthcare is a unique business with special circumstance that demands experienced professionals in order to succeed.

3. Develop in-network contracts with private payors. Surgery centers are increasingly seeking in-network contracts with private payors to ensure long lasting success of the ASC. There are a few steps surgery centers can take to make sure they attract the best contracts available:

• Document outcomes to prove surgery can be successful in an ASC
• Demonstrate strict infection control protocols
• Provide your complication rate and risk management protocols
• Show the companies you are meeting clinical and financial benchmarks
• Emphasize cost savings associated with performing cases in the surgery center

“We just had a four-hour tour with a major private payor to go through our protocols and records,” says Dr. Bray. “The company’s representative decided they wanted to work with us. It’s this type...
of detail that has to be developed because that’s where the future of surgery lies. We are raising the bar for surgery centers so there’s no question these high acuity cases can be performed here.”

4. Pull out all the stops to fight infections. One of the biggest complications associated with spine surgery — and the source of a huge burden to the economics of healthcare — is infections. “Infections are out of control in the United States,” says Dr. Bray. “We are fighting a battle against the bugs and we aren’t winning with antibiotics. The bugs are smarter and faster, and it’s becoming dangerous to do elective surgery in a regular hospital operating room. If we want elective surgery to survive, we must take a different path.”

Some surgeons have chosen to remove their elective spine cases from the regular inpatient ward and into a spine or orthopedics specialty hospital; others have found solace in ambulatory surgery centers, which often have a lower rate of infection than hospitals. However, it takes extra effort to build a center where surgeons can perform 4,000-plus cases and without any infection — which is currently DISC’s record.

“We took a different path with DISC,” says Dr. Bray. “It isn’t an average surgery center. We have 100 percent deep filtered air and strict nursing protocols to avoid infections. There is massive attention paid to every detail.”

For example, there is a terminal employees enter before coming into the building and if nurses had been working at another hospital they are required to discard their old scrubs in favor of new, clean scrubs before continuing into the center. Patients are also separated in the postoperative area to make sure they don’t spread infections from one room to the next.

“You can’t put sick people in ICUs next to patients who have had hip revisions or microspine surgery in the next room,” says Dr. Bray. “This is how we can win against the bugs; we can put patients where the bugs aren’t.”

5. Invest in technology to improve efficiency. We live in an age where technology is a key aspect in running any business because it can accelerate tasks and make care delivery more efficient. DISC surgery centers include a vision computer system that does inventory management, supply control management and stocking management.

“You have to be at a computerized level to look at everything across the board,” says Dr. Bray. “You have to have information at your finger tips. It’s become necessary in this day and age to integrate technology.”

6. Seek out more high acuity cases. Spine surgery is a high acuity, low volume subspecialty for a surgery center, which can be a great business model when done appropriately. However, once you are able to perform spine cases, consider bringing on other specialists who perform high acuity cases, such as partial knee replacements, hip scopes and shoulder reconstructions.

“We are adding high acuity, low volume cases, which bring our centers higher revenue,” says Dr. Bray. “We are able to perform complex cases and deliver better outcomes than in other settings because the complication and infection rate is lower.”

However, adding these cases to a multi-specialty surgery center that usually does low acuity cases requires significant investment of resources. You’ll need to purchase additional equipment and revise your payor mix before adding high acuity cases.
For patient access, it’s getting harder and harder to bring patients in the door and not only do what we think is right, but particularly what the literature (not just one “so called” RCT of indeterminate value and science) supports. Insurance companies, government agencies and other organizations are looking at randomized controlled trials as the be-all, end-all in science for their guidelines. Although retrospective articles, prospective cohort studies, meta analyses, etc., aren’t quite at the level of evidence of randomized control trials, they still are very valuable. There are some randomized controlled trials that are done poorly, but still seem to trump all other articles with contrasting results.

The number two issue is the downward pressure for new technologies, making it hard to pass them through the FDA, and then get insurance approved once cleared by the FDA. My experience has been with the FDA system in the United States, but the same issues are coming in Europe and Asia. It’s extremely, almost prohibitively, costly to gain clearance through the FDA, and then you don’t even know if insurance companies will cover it. (How did they gain that power?) A lot of new ideas are stifled because we can’t afford to develop them, and worse, the decisions on whether they can be used (funded) after approval are based on cost, not science. That’s a problem — as we want to keep the spine field moving forward and advancing opportunities for patient care.

The third point is more on a patient-level; we need to work on our understanding of axial pains like low back and neck pain, and work on defining common words/pathologies to diagnostically describe this pain. We do a good job defining and understanding the natural history and treatment outcomes related to herniated discs and spinal stenosis, but we don’t do such a good job semantically or diagnostically with the more axial, difficult-to-define, pains. Our lexicon for low back pain includes low back pain, degenerative disc disease, facet arthritis, osteoarthritis, strain/sprain, etc. — we have a bunch of words to describe back pain, but our diagnostic/pathologic criteria aren’t good enough to uniquely define them. We have to be able to do that to move forward in recommending treatments. Diagnostic tools (imaging, functional, biochemical markers, etc.) need to be developed that objectively assess the source of pain.

Q: What is the role of ISASS in working with spine surgeons to successfully meet and overcome these issues?

SG: For now, I think our role is first education, then advocacy. Hopefully we can provide surgeons with the newest data and information available. We have international meetings which are helpful to share opinions, oversight and experience with people from around the world. We can also look at the evidence and science on an international basis, which is helpful because some of the “rules” for using or trying new devices outside of the U.S. are less rigid than in the United States. There is a different level of experience out there that can be shared at an individual and academic society level, which isn’t at the individual country (American, German, Japanese, etc.) based level and societies. ISASS is able to provide a forum for education and science to help address patient-related issues that surgeons face all the time.

We’re also focused on the spine surgeon and surgical treatment for patients. That makes the ISASS meetings, by nature, smaller and perhaps more cohesive as a forum than broad-based orthopedic, neurosurgical, or multi-specialist spine groups that cover all operative and non-operative treatments.

Q: How is ISASS responding to challenges with patient access to care?

SG: Since we are a smaller organization, we have to target what we are doing. We are responding on a case by case (state by state, region by region, etc.) basis to insurance company challenges to patient access. Unfortunately, insurance company guidelines vary from state to state, and you don’t know what is coming until the guideline updates are presented. It would be great if there was a way we could be preemptive. In the future we would like to work with insurance companies to help define and write the guidelines.

Most insurance companies use the Milliman and Robertson report for guidelines, which apparently were prepared by non-spine surgeons and non-physicians. They wrote guidelines that are not evidence based, and may cite dated studies.
that are 10 or more years old. We would like to be available and get involved in those discussions before decisions are made about coverage for patient care. I would like us to be able to work more cohesively with other surgeon-based societies such as the American Academy of Orthopaedic Surgeons, the American Association of Neurological Surgeons and spine specialty-based societies so we are all advocating and working toward the same processes.

**Q: How does ISASS handle advocacy efforts internationally?**

**SG:** It’s important for us to advocate for what the science shows, not just our own individual feeling/biases. You have to be able to address those issues on multiple fronts; not just educating surgeons, but also educating those who authorize our care recommendations for patients. Since we’re international, the direction of advocacy could vary depending on where the President is based. However, over the years, clinical care and research has become more universal and what affects surgeons in the United States also becomes an issue in Europe, Asia and all other continents. Advocacy within the United States has been a strong theme for ISASS.

**Q What are your goals for the society over the next year and beyond?**

**SG:** ISASS must continue to grow and attract more surgeons and scientists who not only study devices and techniques, but also surgical outcomes. We want to help develop and promote registries to assess what spine surgeons are doing. I would like us to be the “go-to” society for spine surgeons around the world, not just for education, but also promoting patient education and access to care. I am following some strong predecessors and I hope I will be followed by strong presidents with the same intent: to evolve as an academic surgical society and create a nurturing environment for surgeons, clinicians, scientists, patients and industry that highlights the value spine surgery can bring to patients.

**Q: Where do you see the biggest opportunities in spine care over the next decade?**

**SG:** The biggest opportunities are tied to technology and procedure development. We don’t think ISASS, or any academic society, should be the judge and jury of every new device. If the FDA approves something, we think ongoing outcomes assessments and the market place should decide what is good or bad. The FDA sets standards and tests, and medical device companies pay for the trials. If it is cleared by the FDA and allowed to go forward, I think it should go forward. If we follow that prescription, we will be a group that can nurture this process.

Working collegially with industry, academicians and private practice spine surgeons will help us move forward. If we bring them all together at the same table and have a fair conversation, we can overcome some of the challenges we face today. We should also be at the table with insurance companies and organizations writing guidelines to come up with new ideas, guidelines and policies that won’t bankrupt companies trying to bring products to the market. If the product improves patient care, it should be covered and paid for. That may mean older or scientifically non-validated procedures do not get funding. Decisions in healthcare can’t be just driven by cost.

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The Making of a Minimally Invasive Spine Institute: Q&A With Dr. Frank Phillips of Midwest Orthopaedics at Rush

By Laura Miller

Frank Phillips, MD, director of the section of minimally invasive spine surgery at Rush University Medical Center and a founding member of the Minimally Invasive Spine Institute at Rush, discusses the institute and where the future is headed for minimally invasive spine procedures. The Minimally Invasive Spine Institute at Rush was co-founded by Kern Singh, MD.

Q: What was the catalyst for opening the Minimally Invasive Spine Institute?

Dr. Frank Phillips: I’ve been interested and involved in minimally invasive spine surgery for a long time. Over the past five years, minimally invasive spine surgery has come into its own and we can address many of the traditional open procedures using minimally invasive techniques. One of the problems out there is that minimally invasive spine surgery is loosely defined; some of the procedures are proven effective and some are not. The purpose of our center is to provide a one-stop-shop for minimally invasive surgery that is clearly defined and proven in the literature. This isn’t marketing hype, but about quality surgery that actually works. The real goal of minimally invasive spine surgery is to perform the same surgeries that have a long track record and are proven effective and perform these in a less-invasive fashion without compromising the surgical goals. This is not about “fringe” procedures or unproven technologies searching for an application.

Q: What are your goals for the new facility?

FP: My goal is to perform minimally invasive procedures that are validated and proven effective; that is going to be my and the center’s focus. Another component of the institute is it provides a venue to focus on minimally invasive spine research. We will be gathering patient outcomes and conducting clinical trials among surgeons who are really dedicated to the minimally invasive techniques.

Q: Where is the most research needed for minimally invasive procedures?

FP: Many published studies compare two techniques — minimally invasive surgery and traditional open surgery. Almost uniformly, as you would expect, minimally invasive procedures show improved early outcomes, less blood loss, shorter length of stay and a better postoperative experience. The challenge is to show minimally invasive procedures have better long-term results — the jury is still out on that. In the short term, there is an easier recovery and faster return to activity rates.

One of my personal interests and research passions is examining the economics of healthcare and really looking at the economic impact of what we do as spine surgeons.

Q: Based on your research, how big of an economic impact do minimally invasive procedures have among spine patients?

FP: There is a perception that minimally invasive procedures are more expensive and there is no incremental advantage to doing them; people think the money is not well spent. I’ve spent a lot of energy looking at the economics and value provided by spinal surgery. We recently looked at some of these parameters and presented them at the International Society for the Advancement of Spine Surgery annual meeting. Our research showed that the costs related to minimally invasive surgery for the hospital is less than for open surgeries because the hospital stay is shorter, there are fewer ICU stays and fewer blood transfusions. With all these factors combined, there is a considerable savings to the hospital. Those are the kinds of studies and outcomes that become important in today’s healthcare environment.

Q: Did you experience any challenges in forming and opening the institute?

FP: I think the time is right for minimally invasive spine surgery and an Institute dedicated to this field. I first started performing minimally invasive procedures in the 1990s and people viewed it as “out there” at that time, but I think it’s reached the mainstream over the past decade. One of the challenges with minimally invasive techniques is that there is a steep learning curve because the skills are so different than open surgical skills. In a state-of-the-art minimally invasive spine center, you want surgeons who have experience and done hundreds of these surgeries.

Q: What is your strategic plan for success with the institute in the future?

FP: Success is really all about providing outstanding patient outcomes. One of the things I joke about is that the last thing people want is minimally invasive, minimally effective surgery. If we deliver on the promise of excellent outcomes, less postoperative pain and morbidity, the center will be successful. Dr. Singh and I both already teach minimally invasive techniques and I would like to see the institute become a center for minimally invasive spine education and learning. We want to continue doing research and validating every day in the clinic our patient outcomes.

You’ve got to collect outcomes data on patients you treat. Payors are demanding it and its good medicine to keep track of your outcomes. Regardless of whether you are in a community hospital or academic medical center, economic incentives demand that we collect relevant outcomes data.

Q: Do you have any words of advice for spine surgeons looking to dedicate their practice to minimally invasive surgery and opening a center similar to the Minimally Invasive Spine Institute?

FP: First of all, you have to have commitment to minimally invasive techniques and philosophy. It’s something you must make the focus of your career. You can’t just do a few cases minimally invasively; you have to be really committed to the field and make it a big part of your practice. You also need to have the right people and like-minded individuals involved who have the same passion for minimally invasive surgery. It’s not just about the surgeons — physician extenders, physical therapists and other specialists must understand the procedures as well. Finally, the hospital system has to be behind you and provide the optimal operating facility and equipment to perform minimally invasive surgery safely and effectively. Then you will have success.
8 Spine Surgeons on the Future of Spinal Fusions

By Laura Miller

Hyun Bae, MD, Director of Education at Cedars Sinai Spine Center, Los Angeles: I think we’re going to see a decrease in spinal fusions. Payors have really clamped down on fusion. I think that on the reimbursement side, we are definitely going to see a trend toward reimbursement for fusions decreasing with the government payors as well as private payors.

Robert J. Banco, MD, Associate Clinical Professor in Orthopedic Surgery Department of Tufts University School of Medicine, Founder of Boston Spine Group: What we are seeing now is a confluence of two major issues in spine; one is the aging population — baby boomers are still demanding healthcare because they don’t want to slow down, and the second is the explosion of spinal technology development that is a perfect storm for the increase in the number of spinal fusions delivered annually. I think that will probably slow down at some point and peak again at another date when we have another surge in new development.

Jeffrey Cantor, MD, Spine Surgeon, South Florida Spine Clinic, Fort Lauderdale: The utility of using spine fusion techniques has increased because the procedure has become less invasive. We have developed techniques where we can use spinal fusions that have less interference with the adjacent levels. In the past, the types of spine fusions that we did dramatically changed the structure, anatomy, and the physics of the spine. The newer techniques allow us to do much stealthier operations that permit us to fix an unstable structural problem without dramatically altering the structure of the non-affected areas.

For example, in the past we would perform a laminectomy and posterior lateral fusion, which substantially alter the engineering of the spine. Newer techniques such as interbody fusions allow us to fix a broken segment and maintain the tension bands and the structure responsible for holding the spine together. These newer techniques not only lead to less adjacent-level failure, but have other substantial patient benefits like less dissection, less tissue trauma, less post-op pain and shorter hospital stays.

With the above said, in certain situations there are good and compelling reasons to avoid spinal fusions with advanced and less invasive techniques. Spinal fusions are an excellent solution for structural instability cases, but should always be our last option and not something, as surgeons, we should take lightly.

“Fusions are here to stay; as technology advances, surgeries will be done less invasively and more safely.”

—Dr. Robert Watkins, Jr.

Jaideep Chunduri, MD, Spine Surgeon, Beacon Orthopaedics & Sports Medicine, Cincinnati: If you follow strict outlines on stability, the data we have proves fusion is a good procedure. In the 1990s, everyone had cage rage; now we are in an era of fusion rage, but if patients have the indications to perform the procedure it can be very helpful. I think the current rates of spinal fusion will remain the same for a while.

Dennis Crandall, MD, Founder and Medical Director of Sonoran Spine Center, Phoenix: Looking forward, as we research the effects of spinal fusion and begin to investigate other motion preserving technology and less invasive technology, we are understanding better that there are certain disease processes and techniques that can be used for patients whereas in the past the only option was spinal fusion.

Going forward, we will see a trend of somewhat of a decrease in the total number of spinal fusions done, in a real sense, as surgeons shift to more motion-preserving techniques and technology.
7 Steps for Spine Surgeons to Avoid Commoditization

By Laura Miller

Our current reimbursement model assumes all physicians perform equal treatment with the same outcomes because payors reimburse at the same level regardless of the quality of care. However, as spine surgeons know, not every surgeon has the same level of experience or delivers the same quality of care.

“We have to get over the attitude that spine surgery is a commodity like everything else,” says Khawar Siddique, MD, a fellowship-trained spine surgeon with Beverly Hills Spine Surgery in California. “Spine surgery isn’t like corn or beans. The quality of the individual surgeon is important and varies from one surgeon to the next. Corn is the same no matter where it comes from; among spine surgeons, there is a huge difference.”

The quality of a spine surgeon can be measured by complication rate, patient satisfaction and outcomes reports. Since the quality of spine surgery varies, the price paid for a procedure should also follow suit. Here, Dr. Siddique discusses seven steps for avoiding commoditization in your market and obtaining the payment level you deserve.

1. Emphasize the points of differentiation from competitors.
The days of being a general neurosurgeon who performs both cranial and spine surgery are numbered as more fellowship-trained specialists enter the field. This is especially true for surgeons practicing in a competitive urban environment. You have to set yourself apart as an expert in spine, and offer better care than other spine-focused physicians in your market.

Additional points of differentiation could include:

- Concierge services
- Responsive and caring staff members
- Rapid turnaround to patient questions
- Newer technology

2. Show your surgical skills are different. Payors such as Blue Cross, Blue Shield, United and Medicare calculate reimbursement based on the procedure performed, and not always on the quality of care. However, surgeons should seek better reimbursement if they can prove their quality is better. One of the ways to differentiate your practice from others is showing your surgical skills are more advanced.

“Emphasize the differentiation, such as different surgical skills if you do minimally invasive procedures, or the fact that you don’t have residents or trainees performing the procedures,” says Dr. Siddique. “It’s important
to train surgeons, but the outcome could be different if a surgeon with 10 years of practice performs the procedure as opposed to a second-year resident. One way we are different is that we don’t have any residents. We are trying to show the patients that they’ll get better care from us and that’s why we charge more than other surgeons.”

You can also persuade payors by proving your mortality and morbidity rates are better than the national averages, but you must maintain those rates. “You can’t just increase prices and do the same procedures as before,” says Dr. Siddique. “We emphasize quality over quantity. In our practice, we do fewer surgeries per year but charge more because we can achieve better patient outcomes and experiences.”

Finally, if you have served as an instructor for spinal technique courses, market yourself as a “teacher to the surgeons,” which further exemplifies your expertise.

3. Aggressively negotiate with insurance companies. When going through negotiations with payors, make sure to hold your ground on your prices.

“The worse thing surgeons can do is undercut others by lowering their prices,” says Dr. Siddique. “For example, if surgeon X goes to United and charges half as much as surgeon Y, they’ll cut the rates for surgeon Y as well. Surgeons must be aggressive and not undercut each other. If you negotiate a bad contract, you have to work twice as hard for your income and the quality of your work will drop.”

By going out-of-network, Dr. Siddique says surgeons can signal their outcomes have higher quality than others and demand a fair price. “You can’t gouge patients or payors for the procedure, but you don’t want to undercut others and lower prices either,” he says. “If you are a surgeon from a small town without much competition, you must demand more from commercial payors because you have a position of leverage.”

Spine surgeons can also become part of a group to leverage better negotiations with insurance companies. However, you must be part of a group in order to collectively bargain. “Surgeons are prohibited from joining unions, so if you are not part of a group you can’t collude with other surgeons about the price for procedures,” says Dr. Siddique. “However, if you are in a group all under the same tax ID, you can negotiate for better deals with insurance companies.”

4. Emphasize quality over quantity. Lower reimbursements are forcing many surgeons to focus on performing more cases to cover expenses, which leaves less time to focus on each individual case and patient. The lower reimbursements and higher case volumes can lead to poor quality outcomes and less satisfied patients. Instead of following this path, Dr. Siddique proposes cutting the case load but spending more time with patients and charging more per case, which emphasizes quality over quantity.

“If you cut your case load from 400 to 200 cases and charge twice as much, your gross income is the same at the end of the day but you are emphasizing quality over quantity,” Dr. Siddique says. “Some may say that charging more would increase healthcare costs, but most of the costs associate with spine surgery are hospital costs. Seventy percent of the bill is from the hospital and 30 percent goes to the surgeon. If surgeons reduce the number of cases they are doing, they are taking fewer cases into the hospital and lowering the overall cost of care.”

When surgeons are focused on quantity, it’s more likely they will perform surgery on patients who may not need the procedure, says Dr. Siddique. Instead, surgeons should find out the minimum payment for spine surgery is in their region and raise their prices so they can narrow their case volume to only those who absolutely need surgery.

5. Be selective with indications to ensure great outcomes. To avoid poor outcomes, Dr. Siddique recommends operating only on proven indications — such as patients with stenosis, disc herniation, spondylolisthesis and deformity. “Avoid operating on patients with degenerative disc disease as their only indication,” says Dr. Siddique. “Only operate on patients when you know they will get better.”

Spine surgeons can also operate with other spine and neurosurgeons in the room to reduce complication risks.

6. Use marketing tools to brand your practice. Surgeons must market their private practices to drive patient volume and promote brand recognition. Dr. Siddique says it’s important for practices to have a moniker that reflects their commitment to high level care, which is why his group decided to practice under the name “Beverly Hills Spine Surgery.”

“Beverly Hills denotes a quality of care,” says Dr. Siddique. “The name of your corporation should tell patients about the level of care you provide; such as Premier Spine Surgeons, Inc.”

Focus on any aspects that make your group special in your marketing efforts. For example, if your group includes all fellowship-trained spine surgeons, tout your expertise to show you are a quality organization.

7. Avoid becoming an employee. Don’t become part of an HMO as a hospital employee because patients then would select your services based on the fact that you are part of the program, not your surgical skill or expertise. “When you are part of an HMO, you are paid a salary but you aren’t in control of how much you charge,” says Dr. Siddique. “You become a spoke in a wheel and you aren’t differentiated from other surgeons in the hospital. The patient who needs spine surgery will go to the hospital instead of you, and now you have become a commodity because the hospital will see all spine surgeons as the same.”

Instead, stay independent and negotiate your own contracts. In some areas, it may be necessary to negotiate out-of-network contracts for your procedures.
The Collaborative Spine Research Foundation was created in November of 2011 by a partnership between the American Association of Neurosurgeons/Neurosurgery Research and Education Foundation and the Orthopaedic Research and Education Foundation to promote clinical research and unity among all spine surgeons. The CSRF board of directors includes an equal number of orthopedic surgeons and neurosurgeons, as well as one unaffiliated voting physician.

The organization’s mission is to advance the science and practice of the highest quality spine care through collaborative funding and support of clinical research. Here, chairman of the board of directors James D. Heckman, MD, and secretary and treasurer of the organization Charles L. Branch, Jr., MD, discuss the organization’s purpose and vision for the future.

Q: Why was it important for you to develop the Collaborative Spine Research Foundation?

Dr. James Heckman: The impetus was and is funding more clinical research — more meaningful clinical research. In the past, most research was funded by industry, and in those studies the research requests have been generated by investigators. Investigators have an idea and they create a research proposal and then find a way to get it funded. In our organization, we are going to work with different stakeholders — physicians, specialty societies, patients, insurance companies — to figure out what important questions need to be addressed.

We want to create a research agenda to define the five to 10 really important clinical questions that need answers. We will incorporate those questions into our research agenda and then ask investigators to submit grant requests to specifically address these questions with the hope of finding answers.

Q: How does CSRF fit into the spine research field as a whole?

Dr. Charles Branch: Right now, federal funding of spine-related initiatives isn’t very robust. Of the major spine-related initiatives in the past decade, the Spine Patient Outcome Research Trials study was funded by federal dollars, but no other significant, multispecialty, multi-institutional study was added to our evidence base. Industry also contributes research dollars, but these studies are often for product development or investigational device exemption under FDA supervision. They are generally focused on a specific product, device or technology.

We looked at the field and there are areas of spine care where high quality evidence is lacking. In essence, this is the space where Collaborative Spine hopes to add value. More multi-center research and clinical outcomes trials are needed that are structured to avoid the perception of being tainted — seen as industry-specific research initiatives. We see our Collaborative Spine approach as being an opportunity for developing a research agenda and for funding prospective research with a methodology that is missing in the current platform.

JH: Once the grants are funded, we hope to provide ongoing support, funding and supervision that will ensure successful completion of each project. Some endeavors start out well, but suffer from lack of clinical follow-up, oftentimes because they aren’t funded adequately. This means the research falters after a year or two. Most of the questions we are addressing are going to be important clinical questions that need follow up for five to 10 years. We are going to put monitoring systems and support systems in place to make sure the follow-up data is robust and reliable.

Q: In general, what types of questions do you expect researchers to take on with this funding?

JH: The research will focus on common clinical conditions that have a substantial impact on the healthcare arena today. These questions will center around the frequency of disease and dollars spent.

CB: These projects should help us to identify which treatments and therapies offer the greatest value for patients, industry, payors, government and society in general. I think we are going to have studies that are structured for high level of evidence, which will allow for a great deal of confidence in the results.
Q: What impact will these studies have on the spine care industry?

JH: We hope the studies will provide guidance for physicians and insurers both. We crave guidelines that are based on evidence. Our dream would be that we would have guidance that everyone would accept as valid, and enable patients to be part of the decision-making process as well.

CB: Patients, payors and physicians want to do the best they can with their patients based on the research available. Right now, they don’t have clear guidance for all conditions. When insurance companies aren’t sure whether a certain procedure is effective, they create guidelines constraining physicians. There is an opportunity here to really provide clarity for appropriate spine care. If we can do that for a few major clinical conditions, we will have served society well.

Q: Where will the funding for research come from?

CB: We will be looking to industry to fund some of the investigation, but we are taking the money without any strings attached. When we receive funding commitments, we’ll look at the research agenda and through a peer review process that is independent of the source of funding select which projects to fund. We will decide which proposals get the funding to deliver a good result. Regardless of the outcome, favorable or unfavorable, we’ll support the researcher’s findings.

I think the industry representatives are interested in this process because they know research needs to be more independent, well-designed and vetted through the peer-review process.

JH: We are hoping the insurance industry will provide support as well. We are also looking for foundations and other funding sources to step up. That is part of our solicitation process and hopefully we will have broader funding than just from industry.

Q: What is your goal for the future of CSRF?

CB: Our goal is to enhance the quality of spine care. One of the perceived challenges we have is that we are competing with ongoing initiatives from spine societies. Our goal is not to compete with an individual spine society for industry support, but to accomplish something that an individual society or institution cannot accomplish and provide a path for societies or group investigators to accomplish their goals. Using Collaborative Spine as a funding vehicle that takes industry or other types of support and separates it from any kind of perceived influence allows investigators to generate quality research.

If we can add value to the evidence base, I think we will have done our job.
50 Spine Surgery Practices to Know (continued from page 1)

spinal fusion. The practice includes six spine and neurological surgeons and four locations. The surgeons are members of several professional organizations, including the American Academy of Orthopaedic Surgeons and North American Spine Society.

Arizona Neurosurgery & Spine Specialists (Phoenix). The four physicians of Arizona Neurosurgery & Spine Specialists have a special interest in treating complex spine disorders, tumors and neurotrauma. The group was founded by Byron H. Willis, MD, who currently serves as president of the practice. He is also chairman of the division of neurosciences at Banner Good Samaritan Medical Center. The practice also includes the section chief of neurosurgery at Banner Good Samaritan. The surgeons focus on using evidence-based medicine guidelines to treat their patients and stay on the forefront of surgical technique.

Atlanta Brain and Spine Care. There are five physicians with Atlanta Brain and Spine Care who perform a variety of procedures, including minimally invasive spine surgery, artificial disc replacement and discectomy. The practice was established in 2003 as a Spinal Research Foundation Regional Center of Excellence. Co-founder Regis W. Haid Jr., MD, is also medical director of the Piedmont Spine Center and neurosciences service line at Piedmont Hospital in Atlanta. The practice is led by President Steven D. Wray, MD, who is a past president of the Georgia Neurological Society. In addition to their clinical work, the surgeons are also focused on research and have published more than 100 articles in medical journals. They also lecture worldwide on spine-related topics.

Atlantic NeuroSurgical Specialists (Neptune, N.J.). Henry Liss, MD, established Atlantic NeuroSurgical Specialists in 1958, then known as The Neurosurgical Group of Champlain. The surgeons offer minimally invasive and complex spine surgery for the cervical and lumbar spine. The practice also includes physicians focusing on pain management and sports concussions. There are 15 physicians in the practice, including John J. Knightly, MD, who is the medical director of the neuro-spine team at Athletic Health Institute. In addition to their clinical practice, the physicians engage in research in areas such as biological approaches for spinal fusions. Albert Telfeian, MD, of the practice was among the first neurosurgeons in the country to perform endoscopic lumbar spine surgery.

The Boston Spine Group. The Boston Spine Group includes a team of fellowship-trained orthopedic spine surgeons, physical medicine and rehabilitation specialists and pain management physicians. Led by Robert Banco, MD, the physicians treat patients with degenerative conditions, chronic low back pain, tumors, scoliosis, spinal trauma and spine infections. The group was founded in 1998 and the surgeons perform minimally invasive spine surgery, cervical and lumbar disc replacement and lateral approaches to surgery. In addition to their clinical practice, the surgeons participate in outcomes-based research and FDA-regulated investigations related to spine care.

Boulder (Colo.) Neurological Associates. Boulder Neurological Associates is a seven-physician group, including Alan T. Villavicencio, MD, who is a senior partner and director of research and development for the practice. He also heads up neurosurgery programs at two hospitals and is the director of The Minimally Invasive Spine Institute in Colorado, which he founded. He also founded the Justin Parker Neurological Institute, along with John Parker, MD, which funds clinical research on brain and spine disorders. Surgeons at the practice were among the first in the region to perform lumbar fusion using minimally invasive surgical techniques and the CyberKnife Radiosurgery system. The practice includes six locations and has a focus on providing spine and brain care to athletes. The physicians also participate in FDA-regulated clinical trials for several procedures, including the Trinity Evolution PLIF or TLIF and the Maverick lumbar artificial disc study.

Brain & Spine Center of Texas (Plano). Surgeons at Brain & Spine Center of Texas have an expertise in complex spinal instrumentation, minimally invasive spine surgery and cranial surgery. The practice has five office locations in Texas. In addition to their clinical work, the surgeons are engaged in research and have given presentations internationally about topics such as artificial disc replacement and fusion. Rebecca E. Stachniak, MD, a neurosurgeon with a special interest in spine surgery at the practice, has been a principle investigator for FDA projects that include artificial discs and a trial study on using bone morphogenetic protein for spinal fusions.

Bristol Neurosurgical Associates (Bristol, Tenn.). Jim Brasfield, MD, a neurosurgeon specializing in spine surgery, founded Bristol Neurosurgical Associates in 1985 and then TriCities Spine in 2008, which brings together a team of spine specialists for a one-stop spine care facility. Additionally, Dr. Brasfield co-founded E-cure to improve clinical care and practice efficiency. Surgeons at Bristol Neurosurgical Associates and its subsidiary Tri Cities Spine have expertise in complex back and spine problems. The practice includes spine surgeons, neurosurgeons, physical medicine specialists and an internal pain specialist. In addition to medical services, the practice has MRI, X-ray and an injection suite.

Buffalo Spine Surgery (Lockport, N.Y.). The surgeons of Buffalo Spine Surgery perform several procedures, including artificial disc replacement, XLIF, spinal fusions and skull-based surgery. The practice includes Andrew
Carolina Neurosurgery & Spine Associates (Charlotte, N.C.). Founded in 1940, Carolina Neurosurgery & Spine Associates includes 18 physician partners and 26 physicians in the practice. The practice is one of 17 sites across the United States participating in the National Neurosurgery Quality and Outcomes Database established by American Association of Neurological Surgeons and NeuroPoint Alliance, with the partnership of Vanderbilt Institute of Medicine and Public Health. The practice includes a principle investigator for the NuQu juvenile chondrocyte injection for disc repair and Mesoblast stem cell injections for disc repair. Tim Adamson, MD, is the developer of the Cervical MED and was the first in the region to use an artificial disc for treating degenerative disc disease. The practice includes X-ray, a mobile MRI and upright MRI.

DenverSpine. DenverSpine has MRI, X-ray and injection suite capabilities for patients with back pain. The spine surgeons treat patients with spinal deformity, spine fractures and scoliosis. The surgeons are joined by physical medicine and rehabilitation specialists. In addition to their clinical work, the physicians participate in studies that are published in professional journals. The research focuses on treatment for patients with lumbar disc herniation. Currently, the physicians are enrolling patients in the FDA-cleared adult stem cell study testing mesenchymal precursor cells to treat patients with chronic back pain from degenerative discs.

Deuk Spine Institute (Melbourne, Fla.). Founded by Ara Deukmedjian, MD, Deuk Spine Institute surgeons perform a variety of interventions for back pain, including a new procedure Dr. Deukmedjian developed called Deuk Laser Disc Repair. He also founded the Deuk Spine Foundation, a non-profit organization focused on research and education related to back pain and spine care. The foundation exists to advance spine research and provide a forum for public education and treatment for spine disease. Coupled with the public education on spinal conditions, the foundation supports clinical research to test different treatment options against worldwide registries of outcomes data and sponsors seminars, student projects, senior center discussion groups, scholarships and other outreach initiatives to promote spine health.

Front Range Center for Brain & Spine Surgery (Fort Collins, Colo.). Front Range Center for Brain & Spine Surgery was founded in 1978 and now includes three office locations in Colorado and Wyoming. The surgeons have a special interest in treating patients with a variety of spinal disorders with surgical and non-surgical methods. The practice participates in CORHIO HIE, a secure network linking physicians and other medical providers throughout Colorado to provide access to patient information and physician transcription reports.

Georgia Comprehensive Spine (Athens). The surgeons of Georgia Neurological Surgery founded Georgia Comprehensive Spine in 2010 in collaboration with fellowship-trained physical medicine and rehabilitation specialists. The group includes five spine-focused neurosurgeons that perform treatment for patients with spinal cord injury, brain tumor and other spinal disorders. They are able to perform spinal fusions, minimally invasive surgery and artificial disc replacement. When possible, the surgeons

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**Indiana Spine Group (Carmel).** Indiana Spine Group is led by president and founding member Rick Sasso, MD, who is also the co-medical director of the St. Vincent Spine Center and chief of spine surgery at Indiana University School of Medicine. The practice physicians are currently involved in the development of new surgical treatments and techniques, including FDA-approved studies. In May 2002, the group was among the first to perform cervical disc implants in the United States. Indiana Spine Group includes eight physicians and pioneered the incorporation of ScoliScore, a genetic test to measure the future severity of patients with adolescent idiopathic scoliosis. In August 2011, the practice opened a new 60,174-square-foot dedicated spine center in Carmel. The center includes 16 patient examination and treatment rooms, an imaging suite with MRI and CT scanning, physical therapy suite and an outpatient surgery center.

**Lancaster (Pa.) Neuroscience & Spine Associates.** Lancaster Neuroscience & Spine Associates includes a team of six neurosurgeons and two physiatrists who perform spinal fusions, artificial disc replacements and surgery for brain conditions. Surgeons at the practice include the chief of neurosurgery at Lancaster General Hospital and past president of the Pennsylvania Neurological Society. The practice also includes The NeuroSpine Center, opened in 2009, which includes two operating rooms and is accredited by the Accreditation Association for Ambulatory Health Care. Located in the Eden Road Medical Center next to the practice’s main office, the facility also has MRI and physical therapy.

**Mayfield Clinic & Spine Institute (Cincinnati).** The Mayfield Clinic & Spine Institute was founded in 1937, which means the practice is celebrating its 75th anniversary this year. There are 11 physician partners who have a special interest in a variety of procedures, including axial lumbar interbody fusion, complex spinal reconstruction, cervical and lumbar arthroplasty, minimally invasive spine surgery and deformity correction. The surgeons perform outpatient procedures for appropriately selected patients. In addition to their clinical work, the surgeons are faculty members at the University of Cincinnati College of Medicine. The physicians have shared ownership of The Christ Hospital Spine Surgery Center, joint ownership of Precision Radiotherapy Center and treat professional and collegiate athletes with spine problems.

**Midwest Orthopaedics at Rush (Chicago).** Midwest Orthopaedics at Rush is a large orthopedics group seven spine surgeons as well as pain management and physical medicine specialists. Earlier this year, Kern Singh, MD, and Frank Phillips, MD, co-founded the Midwest Orthopaedics at Rush Minimally Invasive Spine Institute. They treat a wide variety of spinal conditions, including stenosis, deformity and spinal tumors. Dr. Phillips has served as president of the Society of Minimally Invasive Spine Surgery and several of the spine surgeons in the group have been involved in cutting-edge research and innovation. They have participated in FDA research trials for devices such as cervical artificial disc replacements and motion preserving spinal technology. The practice is the team physicians for the Chicago Bulls and Chicago White Sox.

**Midwest Neurosurgery & Spine Specialists (Omaha).** Midwest Neurosurgery & Spine Specialists includes locations in Nebraska and Iowa as well as the Midwest Imaging Center. Surgeons at the practice have a special interest in treating patients with artificial disc surgery, gamma knife surgery and spinal tumor surgery. In ad-

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dition to the clinical practice, the surgeons created the Midwest NeuroScience Foundation to fund research and education for patients with brain and spine injury and illness. Leslie C. Hellbusch, MD, founded Midwest NeuroScience Center and Midwest Neurosurgery & Spine Specialists.

**Midwest Spine Institute (Stillwater, Minn.).** Midwest Spine Institute was established in 1987 and includes a team of spine surgeons, mid-level providers, physical therapists and interventional pain physicians. Surgeons at the practice are able to perform a variety of procedures, including minimal access spine surgery, transfemoral lumbar interbody fusion and artificial disc replacement. Additionally, the surgeons are engaged in ongoing research on topics such as adolescent idiopathic scoliosis and long-term outcomes for anterior cervical discectomy and fusion. The practice also offers a formal Shared Decision Making Program, which allows patients and providers to collaborate on different treatment options based on individual needs and preferences. In addition to the clinical services, Midwest Spine Institute also includes an MRI, DEXA and general radiology.

**Nebraska Spine Center (Omaha).** The spine surgeons of Nebraska Spine Center founded the Nebraska Foundation for Spine Research in 1998. The non-profit foundation supports research by the Nebraska Spine Center and carries out research sponsored by other companies. Studies through the foundation that are currently enrolling patients include a trial for DePuy Spine’s Discover Disc, AxioMed Spine’s Freedom Lumbar Disc and the use of rhBMP-2 for anterior cervical decompression. The foundation’s goal is to promote research that can improve patient care and offer novel treatments at reduced or no cost. Many of the surgeons associated with the foundation have published articles as a result of their work and are committed to serving as a source of education and information related to spinal disease and disorders. Nebraska Spine Center surgeons also opened a physician-owned hospital, Nebraska Spine Hospital, as a partnership with Alegent Health.

**Neurosurgical Surgery (Great Neck, N.Y.).** Founded in 1958 by I. Melbourne Greenberg, MD, Neurosurgical Surgery currently includes 11 partners who perform procedures such as kyphoplasty, X-STOP, minimally invasive spine surgery and revision spine surgery. Physician partners include the chiefs of neurosurgery at several area hospitals, and the past president of the New York State Neurosurgical Society. The practice includes services in 10 different locations as well as imaging and physical therapy offices. The practice hired the first dual trained neurosurgery-spine fellowship neurosurgeon on Long Island in 1998 and surgeons performed one of the first minimally invasive microendoscopic discectomies in the tri-state area.

**NeuroSpine Center of Wisconsin (Appleton).** Led by Peter F. Ullrich Jr., MD, NeuroSpine Center of Wisconsin includes two spine surgeons, two neurosurgeons and five physical medicine and rehabilitation specialists. Dr. Ullrich is the medical director of NeuroSpine Center of Wisconsin and co-founder of SpineHealth.com. The surgeons provide care for disc herniation, degenerative disc disease and spinal stenosis. In addition to surgical and interventional services, the practice includes physical therapy and provides onsite chiropractic care by Schubbe-Resch Chiropractic.

**NeuroSpine Institute (Orlando).** NeuroSpine Institute President Robert L. Masson, MD, a neurosurgeon with a special interest in spinal injury and sports neurosurgery, founded the NeuroSpine Institute Foundation and currently serves as chairman of the board. The foundation was formed in 2010 and has been focused on its

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educational mission ever since. NSIF’s main goal is to promote youth sports and education about how to stop preventable injuries, including concussions and spinal cord injury, from occurring in young athletes. Dr. Masson also recently developed a clinic for patients with failed lumbar spine surgery. This summer, NeuroSpine Institute is opening the Spine Performance Institute for patients to conduct high-end biomechanical evaluations and other rehabilitation services.

**Parkway Neuroscience and Spine Institute (Hagerstown, Md.).** The four neurosurgeons at Parkway Neuroscience and Spine Institute perform minimally invasive spinal procedures, including spinal fusion and discectomy. The practice also includes neurologists, physiatrists, pain management physicians and chiropractors for non-operative spine care. The practice has three locations in Maryland and Pennsylvania, and includes Parkway Physical Therapy. In recent years, the practice has received laboratory accreditation from the American Association of Neuromuscular & Electrodiagnostic Medicine. Practice physicians are also partners with Parkway Surgery Center, where they can perform spine cases.

**Resurgens Spine Center (Atlanta).** Resurgens Spine Center was formed in 1999 and includes 28 physicians. It has 19 clinic locations across Georgia where physicians focus on surgical and non-surgical services. The surgeons perform minimally invasive spine surgery techniques. The group includes trainers for total disc arthroplasty, former team physicians for the PGA Tour and the chief of orthopedic surgery at St. Joseph's Hospital in Atlanta. Ancillary services at the practice are physical therapy, MRI and an ambulatory surgery center.

**Rockford (Ill.) Spine Center.** Rockford Spine Center was founded in 2003 by three partners, all of whom are fellowship trained spine surgeons. The surgeons perform minimally invasive spine procedures and provide ancillary services, including digital X-ray, MRI, electromyography, nerve conduction and physical therapy. Recently, the surgeons were named among the top spine surgeons in the country by *Newsweek*. They also treat patients with scoliosis, spinal tumors and deformity, and perform cervical disc replacement.

**San Diego Center for Spinal Disorders (San Diego).** Behrooz Akbarnia, MD, director of the San Diego Spine Foundation in 2004 to support spine-related research and education. The foundation’s mission is to improve the global care of spine patients through research, education and professional development. The foundation provides funding for the San Diego Spine Fellowship Program, allowing young surgeons to pursue clinical and research education in spine surgery. Since its inception, SDSF has received and provided grants for research studies in adult and pediatric spinal disorders and deformities. In addition to research, the foundation is involved in educational endeavors such as the sponsorship of the San Diego City Wide Spine Meetings for spine surgeons and their clinical staff. Surgeons at the practice treat patients with minimally invasive surgical techniques for degenerative diseases and other disorders, such as spinal tumors.

**Seton Spine & Scoliosis Center (Austin, Texas).** There are four spine surgeons and two nonsurgical care physicians practicing at Seton Spine & Scoliosis Center. The surgeons perform minimally invasive spine surgery, artificial disc replacement and surgical correction of scoliosis. The surgeons are led by co-chief Matthew J. Geck, MD, who also founded SpineHope to support children with spinal deformities through surgery, education and research. Dr. Geck recently traveled to Colombia to develop further sites in Central and South America. Co-chief John K. Stokes was a principle investigator in the FDA IDE study of the Mobi-C artificial cervical disc.

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Sierra Regional Spine Institute (Reno, Nev.). Sierra Regional Spine Institute was founded in 1991 by James R. Rappaport, MD, and includes spine surgeons, neurosurgeons, neurologists, physiatrists, psychologists, chiropractors, physical therapists and occupational therapists. The specialists treat patients with conditions such as disc herniation, scoliosis, spinal fractures and spinal degeneration. It also includes a monthly electronic newsletter for patients. Two of the physicians served as team physicians for the U.S. Ski Team and worked with three recent Olympic Gold Medal winners. There are full-outpatient surgical facilities available within walking distance of the practice at The Quail Surgical Center. There is also a physical therapy center adjacent to the practice offices.

Sonoran Spine Center (Mesa, Ariz.). The Sonoran Spine Center is committed to research through its Sonoran Spine Research and Education Foundation. The foundation is an independent, non-profit organization that conducts and supports spine research. The clinical research conducted through the foundation focuses on several areas, including scoliosis, spine trauma, osteoporosis-related spine fractures and biologic enhancement of spinal fusion. The researchers are also interested in sports-related and work-related injuries. In 2011, surgeons and researchers with the foundation gathered and presented information on several different topics, including the use of rhBMP-2 in transforaminal lumbar interbody fusion and long-term work capacity after spine surgery. In addition to its focus on research, the foundation also supports public awareness programs and advocacy groups for spinal disorders. Sonoran Spine Center is led by Dennis Crandall, MD, who serves as a spinal consultant to several professional athletes and organizations.

South Bend Spine (Mishawaka, Ind.). South Bend Orthopaedics created South Bend Spine in 2010 as a spine specialty center that includes fellowship-trained spine surgeons, non-surgical spine specialists, spine therapists, X-ray and diagnostics. The three spine surgeons focus on various areas of spine care, including lower back treatment, minimally invasive spine surgery and artificial disc replacement. The surgeons are members of several professional organizations, including American Academy of Orthopaedic Surgeons, Indiana Orthopaedic Society and North American Spine Society.

South Florida Spine Clinic (Fort Lauderdale). Founded in 2000 by chief medical officer Jeffrey Cantor, MD, South Florida Spine Clinic includes pain management services as well as spine surgeons. Dr. Cantor performs minimally invasive spine surgery, spinal fusions and total disc replacement. The clinic also includes an on-premise surgical training facility to teach, develop and practice new technologies. The facility also has a fully functional cadaver lab and lecture room.

South Texas Spinal Clinic (San Antonio). Gilbert R. Meadows, MD, founded South Texas Spine Clinic, which now includes 13 locations and 13 physicians. Surgeons perform a variety of procedures, including anterior cervical fusions, anterior cervical discectomy, XLIF and lumbar microdiscectomy. The practice also includes pain management and needle electromyography. The physicians have developed a special therapy program to help patients with their rehabilitation process.

South Sound Neurosurgery (Puyallup, Wash.). Richard Wohns, MD, is the founder and president of South Sound Neurosurgery. He was among the first neurosurgeons to perform the XLIF technique for minimally invasive spine surgery and is a past president of the Washington State Association of Neurological Surgeons.
The practice also offers interventional pain management services and diagnostic techniques, including electromyography. The physicians of the practice perform procedures at the Brain & Spine Center, which also has MRI capabilities.

Southeastern Spine Center (Sarasota, Fla.). Southeastern Spine Center includes a research institute to provide objective evaluation of outcomes for operative and non-operative care for treatment with spinal disorders. Surgeons at the center are currently comparing minimally invasive endoscopic interbody fusion with open interbody fusion as part of a multicentered study being conducted around the United States. The surgeons are also working on a retrospective evaluation comparing open versus endoscopic lumbar decompression, fusion and instrumentation. A third study examines upright MRI with flexion and extension in comparison to supine MRI for differentiating clinical findings. The surgeons have participated in several clinical research trials and worked on designing and developing metallic implants for both cervical and lumbar spinal disorders.

Southern California Neuroscience and Spine. The Center for Neuroscience and Spine, a part of the Southern California Center for Neuroscience and Spine, was founded in 2005 by Ali H. Meiswala, MD. He performs several procedures, including complex operations for patients with skull base, peripheral nerve and movement disorders. He also performs minimally invasive sacroiliac joint fusions and will be the first center to do a clinical research study for SI-BONE. His additional procedures include Synthes ProDisc for cervical and lumbar surgery and the practice is in the process of becoming part of the Medical Tourism Association. This month, the practice is opening a surgery center in Rancho Cucamonga and partnering with two surgery centers in Beverly Hills to open a new office location later this summer.

Southern Oregon Neurosurgical & Spine Associates (Medford). Led by Miroslav P. Bobek, MD, Southern Oregon Neurological & Spine Associates is a comprehensive team of neurosurgeons that treat brain, spine, spinal cord and nervous system disorders. The surgeons perform minimally invasive techniques and use the MEFTRx MicroDiscectomy System. One of the surgeons, David Walker, MD, established an outreach clinic for patients traveling long distances for care, allowing them to complete the initial consultation and follow-up exams at remote satellite locations. The practice currently supports the Southern Oregon Spartans hockey team.

Southwestern Brain & Spine (New Orleans). Southwestern Brain & Spine has 10 providers and three practice locations. The practice was founded in 2006 and includes neurosurgeons and non-surgical specialists. The surgeons have a special interest in complex spine surgery, spinal tumors and degenerative conditions. The practice includes a surgeon who is an NFL-approved second opinion surgeon and a former chairman of the department of neurosurgery at Memorial Sloan-Kettering Cancer Center.

Spine Institute Santa Monica (Calif.). The Spine Institute has a focus on research and clinical trials for several types of spine and back pain management procedures. During the past 10 years, the institute’s research has emphasized the in vivo application of proteins, growth factors, stem cell therapy and biologics to promote spinal tissue generation or regeneration. The Spine Institute’s Spine Research Foundation has participated in several clinical trials, including the study of BMP-7 and nucleus replacement. Current open trials include the treatment of lumbar internal disc disruption with the Biostat System and Intradiscal rhGDF-5 as a growth factor for patients with lumbar degenerative disc disease. Much of the research done at the Spine Research Foundation is later published in professional journals, and the surgeons are often called upon to provide expertise to media sources on spine research and innovation.

SpineCare Medical Group (Daly City, Calif.). SpineCare Medical Group surgeons perform minimally invasive procedures, spinal fusions and advanced internal fixation device procedures. The practice includes X-rays, MRI and CT scans as well as pain management. The physician partners have a research and education division, San Francisco Spine Institute, which provides continuing education and courses for physicians and surgeons. The group is led by Paul Slosar, MD, president of the SpineCare Medical Group and medical director of the Spine Care Institute in San Francisco. He is also assistant director of surgical fellowship and surgical research at The San Francisco Spine Institute.

Spine Colorado (Durango). Spine Colorado includes fellowship-trained spine surgeons and physical medicine physicians. The surgeons perform deformity correction, trauma surgery and total disc replacement procedures. Some of the procedures are performed in an outpatient surgery center. The practice is led by co-founder Jim A. Youssef, MD, who is a member of the International Society for the Advancement of Spine Surgery, North American Spine Society and Cervical Spine Research Society. He also started the research department at Spine Colorado in 2002 and has participated in studies for new spinal implants and procedures. The physicians are engaged in research and lecture across the country on spine-related topics. The practice has three locations and provides care for several local athletes.

Summit Spinecare (Woodbury, Minn.). Summit Spinecare is a division of Summit Orthopedics, which was launched when the practice opened a 38,000-square-foot building in 2009. Approximately 6,500-square-feet are dedicated to the spine center, which includes six operative and non-operative spine physicians. Surgical options include minimally invasive spine surgery, scoliosis care and spinal fusion using bone morphogenic protein. The surgeons are fellowship-trained and members of the American Academy of Orthopaedic Surgeons. Summit Spinecare is a spine center of excellence that includes diagnostics, exercise gym and spine-specialized therapists all under one roof.

Texas Back Institute (Plano). Stephen Hochschuler, MD, and Ralph Rashbaum, MD, founded Texas Back Institute in 1977. In 1985, the Texas Back Institute Research Foundation...
was founded to improve care for patients with back pain through research and education. The foundation's work has included total disc replacements, minimally invasive procedures and pre-surgical psychological screening. The practice also has a fellowship program that has trained more than 70 spine surgeons through fellowships and visitor programs, and much of the research done at the foundation has been published in professional journals. In 2004, the practice also formed Texas Back Institute Clinical Research, an organization dedicated to advancing new spinal technologies and techniques, which has supervised clinical research trials, research studies and education programs. The current clinical trials include a study comparing the VertiFlex Superion Interspinous Spacer to the X-Stop Interspinous Process Decompression System for spinal stenosis, and the clinical and radiographic outcomes of anterior lumbar interbody fusion using a novel stand-alone interbody fusion device.

**Texas Spine Consultants (Dallas).** Texas Spine Consultants is located at Baylor University Medical Center and includes five physicians. The practice includes the fellowship director for the Dallas Spine Fellowship and a pain medicine physician. The surgeons perform minimally invasive treatment for scoliosis, surgical resection of spinal tumors, cervical and lumbar total disc replacement and image guided surgical navigation. Physicians from the practice have earned the Patients’ Choice award.

**Total Spine Specialists (Huntersville, N.C.).** Total Spine Specialists includes four offices in North Carolina. Led by co-founding physician Mark Hartman, MD, and Paul J. Tshakiris, MD, the practice includes physicians who perform minimally invasive spine surgery. All together, the surgeons have performed more than 7,000 spine surgeries with approximately 400 cases using minimally invasive techniques annually. In addition to their clinical practice, the surgeons engage in research and present their findings at national society meetings.

**TriState Neurological Associates (Erie, Pa.).** TriState Neurological Surgeons partners with Saint Vincent Health Care to provide brain, spinal and neurosurgical care. It is the community arm of the department of neurological surgery at the University of Pittsburgh and serves patients in Pennsylvania, Ohio and West Virginia. The physicians focus on treating patients with spinal stenosis, spinal fractures, spinal tumors and other conditions. The practice has 15 office locations and includes neurosurgeons for NFL athletes and the team neurosurgeon for the Pittsburgh Steelers. Several of the surgeons also hold leadership positions within their local hospitals, including the chief of neurosurgery at UPMC Passavant.

**Twin Cities Spine Center (Minneapolis).** John H. Moe, MD, founded Minnesota Spine Center and Twin Cities Scoliosis Center, which merged in 1998 to become Twin Cities Spine Center. The practice includes 10 fellowship-trained spine surgeons and a full research department. The surgeons now involved with the research department examine operative and non-operative treatment, diagnostic methods and the natural history of spine problems. More than 500 medical papers have been published in peer-reviewed medical journals as a result of research done at the practice. Twin Cities Spine Center also supports a fellowship program that has trained more than 140 spine surgeons.

**Virginia Spine Institute (Reston, Va.).** Virginia Spine Institute President Thomas C. Schuler, MD, founded the practice in 1992, and since then VSI spine surgeons have participated in several cutting-edge research and development projects. These projects include studying the safety and effectiveness of the Maverick Total Disc Replacement for lumbar degenerative disc disease, Prestige LP Cervical Disc and a clinical trial involving anterior cervical interbody fusion using rhBMP-2 soaked into an absorbable collagen sponge. In 2002, Dr. Schuler founded The Spine Research Foundation, which is now directed by Brian R. Subach, MD. The foundation was formed with the goal of promoting fact-based medicine among spinal healthcare. In addition to the focus on research, The Spine Research Foundation has also built an education program to promote spinal health awareness among the general public, with efforts including the “We’ve Got Your Back” race, walk and spinal health fair held at locations around the country.

**Watkins Spine (Marina del Rey, Calif.).** Robert Watkins III, MD, is a founding member of the North American Spine Society and director of the Marina Spine Center, along with his son who also practices at Watkins Spine. The Marina Spine Center includes rehabilitation services. During his career, Dr. Watkins has treated several professional athletes and trained countless spine surgeon fellows. The surgeons are able to perform minimally invasive procedures and use image guidance when performing spine surgery. They focus on operative and non-operative care, and Dr. Watkins was an investigator for the ProDisc and Charite artificial disc FDA studies.

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### 5 Thoughts for Spine Surgeons on Migrating Cases to ASCs

**By Laura Miller**

There are several steps spine surgeons must take when migrating their cases from the inpatient setting to an outpatient surgery center. Beyond the appropriate training, surgeons must consider how their practice will change as a result of the transition and seriously think about the commitment.

“One of the first things that a spine surgeon should do is conceptually define their current practice in the ASC,” says Marcus Williamson, president of the spine division of Symbion Health Care. “He or she must think of the ASC as an extension of their practice.”

Here, Mr. Williamson discusses what surgeons should know before taking the leap from inpatient settings to the outpatient setting for patients who qualify.

**Moving forward**

Before spine surgeons make a definitive decision about taking cases into a surgery center, Mr. Williamson suggests they visualize how their practice will change and decide whether the transition would work for them. He categorizes several changes as “Inside the House” or “Outside the House” — the house being the surgical environment — and asks surgeons to conceptualize what their best days would look like.

**Inside the House** factors include:

- Room turnover
- Implant costs and utilization
- What supply shelves look like
- Patient outcomes
- Referrals
- Optimal reimbursement, with the right exclusions and implant parameters
• Personnel needed for the business office
• Billing and collections staff
• Case types which will migrate soon to a 23 hour (overnight discharge) stay

“Outside the House” factors include three equally important groups:
• Development of vendor relationships
• Development of a cross-pollinated network
• Commitment to an introduction educational series

While “Inside the House” factors are relatively straightforward, there are several steps surgeons must take for success with the “Outside the House” factors. These should be considered carefully as they move forward.

Vendor relationships
Carefully choose which vendors to form the strongest relationships with as you transition cases into an ASC. There may be five main implant vendors occupying the outpatient spine space, but it would benefit you to trim your preferences down to two. “Create a loyalty to one or two vendors to help with pricing,” says Mr. Williamson. “As you look at the cost of the implants, for you and your patients’ out-of-pocket expense, you want to work exclusively with fewer than three vendors for surgical cases.

Vendors can also help introduce spine surgeons into the market. “If they have a cervical fusion product, implant or cement, they can co-brand the device with you, which helps you make an introduction into that market,” says Mr. Williamson. There are three types of outside-the-house arenas vendors focus on as they break through into the market:
• Direct-to-physician — vendors can help coordinate meetings or lab that physicians receive educational credits because vendors have the CEU designation for diagnosing and treating conditions.
• Direct-to-patient — vendors can co-brand the surgeon’s name with their marketing materials for direct-to-consumer efforts.
• Direct to health plan — vendors can work with you to present information about procedures and technology used during spine surgery for better coverage and the patient’s utilization of benefits in the surgery center setting.

Cross-pollinated network
There are some pretty strong loyalties within a group of orthopedic, spine, neurosurgery and pain management physicians, and all of these physicians are potential referral sources. For example, if a patient shows up at an orthopedic surgeon’s office with leg pain but their problem stems from spine issues, the orthopedic surgeon can refer these patients to local spine or neurosurgeons in their area.

“Once the referral occurs, physicians have a relationship with each other,” says Mr. Williamson. “We are learning that networking is what the future of healthcare is all about. Independent physician groups are identifying specialists to help them contend for larger managed care contracts and cost controls.”

After the initial relationship is formed from one referral, the physicians begin to become familiar with each other and tend to stay within their networks for referring patients as much as possible. “There has to be a champion to make sure the loyalty within the network is maintained; it’s a quid pro quo system,” says Mr. Williamson. “Networks are the future, and practice administrators can assist their physicians with that.”

Introduction educational series
Physicians are the experts at performing spine surgery, so they must impart their expertise to the other crucial members of the healthcare system: patients, health plans and referring physicians. Meet with these groups and give them educational presentations to bring them on-board with performing cases in a surgery center.

In meetings with referring physicians, bring along vendors and anesthesiologists to reassure physicians that every aspect of care is provided. In discussions with health plans, bring in the business office manager for the best results. The business officer should invite several key people to the meeting:
• Medical director of the orthopedic and spine services of the health plan
• Clinical compliance representative from the health plan
• Billing and revenue department lead
• Local managed care or provider relations representative

It’s necessary for all of these people to attend the meeting. “Set up meetings with the local provider relations representatives for each of the large health plans and have a presentation prepared in paper or power point,” says Mr. Williamson. “It’s educational in terms of what happens during the case, with regard to the conditions and outcomes you achieve with surgery. At the same time, it’s an introduction of what you plan to do and what your planned outcomes are.”

Additionally, surgeons should present a comparison of the cost-to-charge ration of the average reimbursement in their markets for hospitals and surgery centers. “You want to do a comparison of average reimbursement in that market and you want to really focus on all of the proprietary instruments that are used in a case and their costs,” says Mr. Williamson. “The focus on variable cost can make or break your contract with that certain health plan.”

At the end of the presentation, it helps to get real pictures and comments from patients to represent the human element of your practice. “The patients make it real for the people viewing your presentation,” says Mr. Williamson.

Physician gut check
While it’s tempting to make your decision about investing in a surgery center based on the extra revenue it could generate, surgeons must place more importance on patient care to really succeed. “It’s a mistake to just think about how much money you’ll be making,” says Mr. Williamson. “Focus on the type of staff you are willing to acquire; focus on the referring physicians you’ll attract. Conceptualize your practice.”

As they spend time in the surgery center, physicians will need to monitor their outcomes in the outpatient setting. Mr. Williamson says 50 percent of their focus should be on their ability to promote their own outcomes, while the other 50 percent is on risk management. A few of the metrics to monitor for patient outcomes include:
• Surgery time
• Amount of prescription drugs patients are on before the surgery
• Blood loss during surgery
• Surgical recovery
• Return to work time

Many surgeons find benefits in bringing on a corporate partner or entity to help them cross the bridge from concept to reality. “The corporate partner should have success rates, success stories and physicians you can talk to about their experience of developing market entry strategies,” says Mr. Williamson. “Tap into those resources and you’ll have an easier transition.”
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How Does Kentucky’s Latest Pain Management Legislation Impact Physicians? Q&A With Dr. Laxmaiah Manchikanti of ASIPP

By Taryn Tawoda

Earlier this year, Kentucky signed into law a bill requiring physicians to consult the state’s online drug database, Kentucky All Schedule Prescription Electronic Reporting, prior to prescribing pain medication to a patient. The bill, HB 1, targets the overprescribing of opioids and introduces stricter definitions and standards for pain management clinics.

Laxmaiah Manchikanti, MD, chairman of the board and CEO of the American Society Of Interventional Pain Physicians and the Society of Interventional Pain Management Surgery Centers, discusses the impact of the bill for both physicians and patients, and how Kentucky now aligns with other states on policies to curb prescription drug abuse.

Q: Why is HB 1 important for both patients and physicians?

Laxmaiah Manchikanti, MD: HB 1 essentially could be a win-win situation for both physicians and patients, along with law enforcement, by curtailing opioid abuse while still maintaining access to appropriate opioid therapy for patients who need it. Even though it may not be appreciated by many physicians at the present time, it does include many features which do help physicians. One of the major issues of concern for physicians was moving KASPER to the attorney general’s office. That did not happen; it continues to stay with the Cabinet for Human Resources.

HB 1 provides a definition of a pain clinic, even though it does not go far enough. Based on this law, all pain clinics must be run by pain physicians who are board certified by an ABMS Medical Specialties Board, American Osteopathic Board, American Board of Pain Medicine or American Board of Interventional Pain Physicians, or must have completed an accredited fellowship in pain medicine. Further, any clinic which provides prescriptions for more than 50 percent of opioids or more than 50 percent of patients are treated with opioids will be considered a pain clinic.

This protects patients as they will only be able to go to legitimate pain clinics, thus avoiding potential abuse. It also saves the patient from spending exorbitant amounts of money that non-legitimate pain clinics charge.

It is good for physicians because they are now essentially forced to perform appropriate evaluations and documentation through the now-mandatory KASPER program. They must also meet the indications and medical necessity criteria prior to embarking on chronic opioid therapy and document procedures.

Physicians have another advantage in addition to mandatory KASPER: the physician will be informed immediately of any investigation by authorities. Further, KASPER lifts its restrictions of disclosure after July 12, which will become part of the medical chart, falling under the same confidentiality regulations under HIPAA.

Q: How will this law affect patients and physicians in the short-term?

LM: In the short-term, of course there will be multiple misunderstandings and fear among physicians. We are already seeing this. However, once physicians understand the essence of the law, its impact will be minor if they are willing to follow the rules and regulations with proper assessment of the patients, documentation of medical necessity and indications, adherence monitoring with mandatory KASPER, and other evaluations.

Q: What do you hope it will accomplish long-term?

LM: In the long-term, if all the components are followed, it will reduce opioid abuse in the state by at least 50 percent. However, we need to understand that in the majority of opioid fatalities patients supposedly receive appropriate doses. Forty percent of the fatalities are from 10 percent of the patients who receive high-dose opioids which have been defined as greater than 100 mg of morphine per day, whereas 20 percent of fatalities are from low-dose opioids defined as less than 100 mg of morphine a day. Finally, 40 percent of the fatalities are due to drug abuse. We should be able to substantially reduce the fatality rate and abuse rate and also those receiving high doses of opioids.

It was recently illustrated that since opioid guidelines were implemented in Washington state in 2007, opioid prescriptions have reduced along with a 50 percent reduction in fatalities related to opioids. Research showed that prescriptions of long-acting opioids decreased by 27 percent and the proportion of workers on doses greater than 120 mg or greater dosages of morphine equivalents was reduced by 35 percent, with a 50 percent decrease from 2009 to 2010 in the number of deaths. Above all, the main impetus of HB 1 in the long-term is that it will curtail abuse without affecting the access.

Q: What sort of training and changes will physicians need to undergo in their practices now that the bill has been signed into law?

LM: All physicians need to be empowered through education rather than enforcement. It is well known that physicians receive very little education in controlled substance management, and also long-term chronic pain management. Thus, additional education is essential not only for pain physicians, but for all physicians.

There are numerous ways of improving education to meet the appropriate medical necessity, indications criteria, evaluation of chronic pain patients, adherence monitoring, etc. One way is through the educational courses provided by American Society of Interventional Pain Physicians such as controlled substance management, comprehensive review courses and competency certification examinations. Another source is the American Society of Addiction Medicine and the American Academy of Pain Medicine.

Physicians must learn how to properly document and also properly assess the patients. This will also weed out many abusers.

This bill also provides for the governor, at his or her discretion, to appoint specialty representation necessary on the Kentucky Board of Medical Licensure, which continues to be the most important organization in monitoring physician compliance. It will facilitate the governor to appoint pain physicians to the board, which also in turn would facilitate development of appropriate guidelines to for chronic opioid or controlled substance management.
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Q: Were there any parts of the bill that were not ultimately signed into law? If so, which parts? And do you plan to pursue future legislative action to get them approved?

LM: One of the main important aspects which did not pass the law was a pill dispenser – Pill Guard. This would have been a great addition to adherence monitoring, which would have further reduced abuse.

Q: The Kentucky Medical Association has argued that running multiple KASPER reports throughout the day may be very challenging for busy physicians because the reports can take up to 10 minutes per patient. What is your response to this?

LM: To some extent, we agree with the Kentucky Medical Association; however, this can be accomplished by medical assistants and other staff. It is not necessary for a physician to do this personally. However, once the physicians are organized and understand the system it will only take about five minutes or less of ancillary personnel time to provide this information to the physician. This will provide clarity to the physician and provide appropriate care to the patient. This in essence reduces physician time rather than increase it. In my office, we have been implementing this technique for about eight years now and have not found it to be very difficult. In the past we ran KASPERs initially and then every six months; however, now we will be running them every three months. I believe that this is a great option and I strongly support mandatory KASPER.

Q: Now that the bill has passed, how does Kentucky stack up to other states in terms of prescription drug monitoring?

LM: Kentucky has been at the forefront with the availability of KASPER; however, the majority of physicians have not used it. Because of KASPER, we actually were able to enact National All Schedules Prescription Electronic Reporting Act (NASPER) at the national level which provides funding for each state with the requirement that they meet certain criteria and provide a physician-friendly process, along with communication with contiguous states. The same principles are adapted or being attempted by Harold Rogers program which essentially blocked NASPER. After it was signed into law in 2005, NASPER was funded for only 3 years. Even then it had an enormous affect with almost all the states now having implemented such a program (only Missouri and New Hampshire have pending legislation) and 41 states already have active programs. Even still, KASPER continues to be number one in prescription drug monitoring.

4 Steps to Greater Collaboration Between Pain Management & Primary Care

By Taryn Tawoda

Opioid narcotic underutilization and overutilization are common concerns among primary care physicians and pain management physicians alike, and a clear communication system between physicians can ease the risk of inaccurate or inconsistent prescribing, says Yousuf Sayeed, MD, of the Spine Center at DuPage Medical Group in Naperville, Ill.

“How do we improve opioid control, not just in our own office, but also among referring physicians?” he says. “Patient treatment agreements, assessments, urine screening, a prescription monitoring program — how can we share that information with our primary care colleagues?”

For Dr. Sayeed and his colleagues at DuPage Medical Group, the answer lies in the sharing of electronic medical records, which allows all physicians to stay up-to-date on the latest changes in prescriptions, tests and health needs of patients treated with opioids. The clinical pathway is intended to help make prescriptions more consistent and has served to lessen uncertainty among physicians who sought greater collaboration with pain specialists. “We’ve had a very positive response from our primary care doctors, and we have continued to refine the pathway based on their input,” he says.

Dr. Sayeed discusses the steps taken to facilitate and implement a collaborative electronic medical record-based clinical pathway between primary care physicians and pain management specialists.

1. Identify sources of miscommunication between primary care physicians and pain management physicians. The need for a collaborative system stemmed primarily from the types of patients referred to Dr. Sayeed and his colleagues. “We were getting a lot of patients referred from primary care physicians because they felt uncomfortable writing the prescriptions for medication,” he says. “They may have inherited a patient that was on chronic opioids and felt uncomfortable with that scenario, or they were concerned with a patient that was misusing.”

The biggest challenge, however, was in the communication of the reasons as to why the patients were referred from primary care to pain management. Specifically, it seemed as though primary care physicians were worry about underprescribing or overprescribing pain medications. “As we looked into this, we found that the prescribing habits of our primary care physicians did exhibit some variability, even within their own practices,” says Dr. Sayeed. One physician would prescribe Oxycontin, for example, and another physician within the practice would not refill the medication. While such variability is certainly not unique to DMG, it presented an ideal opportunity to partner with physicians throughout the group to improve the quality of patient care.

To facilitate greater collaboration among prescribing physicians and to ensure that patients were given consistent care, Dr. Sayeed and his colleagues collaborated with their primary care colleagues to create a clinical pathway that allows both primary care and pain management physicians to access patients’ electronic medical record and keep track of all prescriptions, check-ins and tests. For this reason, the collaboration was driven by the DMG.PS care physicians and pain management physicians.

2. Facilitate the sharing of electronic medical records among a network of physicians. The sharing of electronic medical records was particularly convenient for Dr. Sayeed and his colleagues, all of whom are part of the multispecialty medical system DuPage Medical Group, which is comprised of more than 400 providers who use the same electronic medical records system. DMG has also recently developed a partnership with nearby Edward Health System in Naperville, Ill., which will enable Edward’s physicians to utilize the same electronic health record system. “In total, we will have more than 500 providers who utilize the same EMR,” says Dr. Sayeed.

Shared access to patient medical records enables pain management physicians to stay up-to-date with the patient’s progress with his or her primary care physician, and vice versa. However, collaboration does not necessarily
require electronic medical records, Dr. Sayeed says. “Collaboration can be done by fax or phone, as long as the communication channel is there,” he says. “It’s about reaching out to primary care physicians, understanding what their concerns are and addressing them. It’s about evidence-driven prescribing that enables the best care for patients.”

3. Create a clinical pathway in electronic medical records. When a primary care physician logs in to the electronic medical records system to access a patient’s record, a yellow prompt will appear indicating that the patient is currently being treated with opioids, Dr. Sayeed says. The prompt also allows the physician to initiate a clinical pathway developed specifically for such patients, which provides tools that can be utilized to effectively manage the care of such patients and allows for discrete documentation that can later be accessed by a pain management physician who is consulting the same patient’s record.

This system results in improved communication when a primary care physician refers a patient to a pain management specialist. “When we see that patient, all of the information is there [in their record], and we don’t have to read the mind of the primary care doctor to know why the patient was sent here,” says Dr. Sayeed. “When we send the patient back, the primary care physician can see [on the medical record] what our specific concerns were with the patient.”

4. Share crucial components for the care of patients being treated with opioids. These components include: patient and physician treatment agreements, urine and blood lab screens and LFT tests, prescription monitoring database checks, functional and psycho-social assessment scores, regular three-month follow-up appointments and referrals of patients to pain medicine specialists when appropriate. DMG has included each of these components into its clinical pathway in an effort to improve patient care and facilitate the sharing of information between the providers in its network. “Based on the sharing of that information, we have the ability to collaborate on the development of safer, more appropriate care plans for each of our patients,” says Dr. Sayeed.

Succinct psycho-social (DIRE Score) and functional assessment tools are utilized to determine the patient’s appropriateness for treatment with opioids and the progression of their condition in response to treatment. With the results of these tests in hand, primary care physicians can more readily and confidently prescribe opioid medications and determine when to refer the patient to a specialist, says Dr. Sayeed. “With access to the pathway’s tools, a primary care physician can also assess if the patient has been abusing or diverting medications,” he says. “They can address all of that before they engage in chronic opioid prescriptions — they don’t need to wait until it gets out of control, and until the liability is out there, before they send patients to us.”

10 Benchmarking Statistics About ASC Pain Management Revenue

By Rachel Fields

Here are 10 benchmarking statistics on net revenue for pain management cases in the ASC setting, according to data from VMG Health’s Multi-Specialty ASC Intellimarker 2010.

1. Average net revenue per pain management case was $898.

Based on number of operating rooms:

2. Average net revenue per pain management case in ASCs with 1-2 ORs was $628.

3. Average net revenue per pain management case in ASCs with 3-4 ORs was $778.

4. Average net revenue per pain management case in ASCs with more than four ORs was $770.

Based on case volume:

5. Average net revenue per pain management case in ASCs with fewer than 3,000 cases per year was $985.

6. Average net revenue per pain management case in ASCs with 3,000-5,999 cases per year was $839.

7. Average net revenue per pain management case in ASCs with more than 5,999 cases per year was $902.

8. Average net revenue per pain management case in ASCs with less than $4.5 million in annual net revenue was $898.

9. Average net revenue per pain management case in ASCs with $4.5-$6.99 million in annual net revenue was $947.

10. Average net revenue per pain management case in ASCs with more than $6.99 million in annual net revenue was $1,020.

Information comes from VMG Health’s Intellimarker benchmarking study. VMG Health is a leading valuation and transaction advisory firm in healthcare.

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Dr. Brian Cole: 5 Big Challenges for Orthopedic Surgeons Today

Brian Cole, MD, section head of the Cartilage Research Program and Cartilage Restoration Center at Rush University Medical Center, discusses five big challenges facing orthopedic surgeons in today’s volatile healthcare environment.

1. Consolidation in the healthcare space.
Over the past few years, more consolidation in healthcare has meant small orthopedic groups are merging together or with hospitals, and hospitals are joining larger health systems. Orthopedic surgeons are also becoming employed by hospitals at a higher rate than in the past. “There is clearly a move toward consolidation and that’s something physicians need to be prepared for,” says Dr. Cole. “There is an economy of scale for physicians joining hospitals, but physicians are at risk of losing control over the environment.”

Around two-thirds of all physicians are now employed by hospitals, which has changed the care delivery model considerably. Providers are focused on improving efficiency, quality and lowering the cost of care through models such as accountable care organizations, bundled payments or another form of physician alignment.

“It’s certainly possible that the concept of bundling physician and hospital payments will become more of a reality as fewer systems with a larger number of participants occur,” says Dr. Cole. “There will be a large number of providers under a few umbrellas and we’ll need to figure out how payments are tagged for either the provider or the hospital. People will be in a position to start creating change in this area.”

2. Loss of physician control.
New government regulations have made it difficult to sustain a single-physician or small group practice, which is one reason why more orthopedic surgeons are choosing hospital employment. While this arrangement provides for more defined working hours and set salary, employment also means following the hospital’s processes and rules.

“It makes sense economically to consolidate because everything from the administrative functions of the practice to the IT required to run your business are huge expenses, but there is also a perception of loss of control that some physicians have otherwise enjoyed,” says Dr. Cole. “Hospital employment could be evolutionary or revolutionary; I think there’s a possibility that it could be revolutionary.”

In other specialties, such as cardiology, almost 100 percent of the physicians are employed by hospitals because it wasn’t economically feasible to remain independent. “I think orthopedic surgeons have been more protected, but the protection we’ve enjoyed is artificial,” says Dr. Cole. “If it’s happened with other healthcare providers, it’s a matter of time before it happens to us.”

3. How much of healthcare reform will be enacted.
While it remains to be seen whether the Patient Protection and Affordable Care Act will be enacted or repealed, it will impact physicians significantly over the next several years. “If components of healthcare reform fall into place, ranging from mandatory coverage to mandates of where and what services physicians perform, we are going to have challenges,” says Dr. Cole. “Providers will also have increased difficulties managing the financial exposure associated with federal programs such as Medicare.”

Another big issue will arise if PPACA extends coverage to the currently uninsured population. If more people are insured and begin seeking orthopedic care, patients will have a difficult time obtaining access to care, especially if they have government payors. Government payors have traditionally reimbursed less than other payors, and if the reimbursement doesn’t meet cost of care, another set of problems will ensue.

“There is a supply and demand issue, and it will become a requirement to look at the cost of providing care and potential reimbursement,” says Dr. Cole. “Once cost of delivering care exceeds reimbursement, we’ll have a different healthcare delivery model. This will depend on how much of healthcare reform is enacted.”

4. Growth within an active aging population.
As people age, they become more likely to need orthopedic care. The baby boomer population is increasing and many wish to maintain a high level of activity well into their later years. “Orthopedic surgeons must have an understanding of wellness and increased longevity and higher levels of activity in individuals of that age,” says Dr. Cole. “That’s a population I see day in and day out as they demand higher levels of resources, and appropriately so.”

With technology and procedures constantly advancing, orthopedic surgeons are able to provide care for these patients and return them to a level of activity that wouldn’t have been possible in the past. People are learning that they can enjoy an active lifestyle in their 60s and 70s, and with that requires extra care to help them increase functionality,” says Dr. Cole. “The good news is we can treat these people; the bad news is that the economic burden will have an impact on what we can do.”

The baby boomer population is one of the largest generations in America, and as they move toward Medicare coverage the sheer volume of people and demand for a higher level of care will affect the healthcare system. “There is no question that baby boomers will have an impact,” says Dr. Cole. “Their demands on the healthcare system will outstrip what they did even 10 years earlier. They need care and that places a demand on healthcare resources.”

5. Developing evidence-based guidelines for orthopedic care.
Traditionally physicians were threatened by emerging pay-for-performance models, which compensated them for outcomes as a value proposition; increasingly, payors, hospitals and government regulators have been pushing physicians toward value-based decision making. Physicians must look at evidence in the literature and consider the cost of care to determine whether their treatment pathway is appropriate and value-driven.

“I think it’s likely there will be an increased number of guidelines that are determined by evidence based medicine which I think will start to cause fragmentation within the provider side,” says Dr. Cole. “There will be a need for general orthopedic surgeons in rural areas, but in areas with large population density, it makes sense to have care predicated on centers of excellence with well-defined critical paths.”

Orthopedic surgeons are beginning to specialize down even further from “orthopedics” to consider themselves “knee surgeons,” “shoulder surgeons” and “sports medicine” physicians.

“If you do more of one procedure and you function in a system that has developed critical pathways — driven by predictably good outcomes — then you have a model that is favorable for a wide distribution of services within a center of excellence,” says Dr. Cole. “However, delivering high quality outcomes isn’t always associated with economic advantages. Considering cost as only related to the resources used, underestimates the true cost of care. Failure of intervention, delays in return to work and the cost of revision surgery should all be considered when looking for the most ‘cost effective care.’”
Dr. Caillouette and Gabrielle White, director of Perioperative Services at Hoag Orthopaedic Institute, provide their insight for creating a successful bundled payment agreement for orthopedic procedures — an alliance that has become increasingly important post-healthcare reform.

“I think bundled payment could become the standard in the future,” says Dr. Caillouette. “It will take some time, but there is opportunity for specialties with high volume procedures, such as knee and hip replacements, to establish bundled payments.”

1. Negotiate which patients will be eligible for bundled payments. Not every patient is a good candidate for the bundled payment program because providers won’t want to receive the flat rate for care if patients have high comorbidities or likelihood for readmissions. “We negotiate which patients will qualify based on medical criteria,” says Dr. Caillouette.

The patients in the IHA bundled program must meet certain criteria, including:

- An American Society of Anesthesiologists score of 1 or 2
- BMI less than 39 (although Dr. Caillouette recommends a BMI less than 35)
- A member of the participating payor’s PPO
- A lack of comorbidities increasing the likelihood of complications, such as diabetes or HIV

“We look at the patient’s history, comorbidities, age, insurance status and all of these different factors are used to determine whether the patient is eligible to be part of the bundled pilot program,” says Dr. Caillouette. “Beyond the IHA bundled payment pilot, we set up specific criteria with each patient.”

In the past, insurance companies reimbursed for the extra work associated with complications and readmissions, but the bundled payment program eliminates that payment during an agreed upon postoperative period.

“We want ideally to have the healthiest patients possible for all surgery, especially the episode of care because we want to minimize the risk for infection, complications and readmissions,” says Dr. Caillouette. “The negotiations for the IHA pilot took well over a year because, from a payor standpoint, they are trying to reduce their risk. From a provider standpoint, we don’t want to take on too much risk. The negotiation goes back and forth.”

2. Understand the literature and do risk adjustment. Providers going into bundled payment negotiations should understand the outcomes data and literature for a given procedure to negotiate the most desirable terms for patient selection.

“You really need to look at procedure-specific data and understand what the highest risk factors are for postoperative complications,” says Dr. Caillouette. “This should be national data — that’s what payors are looking at. Everyone is mining the data and trying to offset their risk. That’s what people really need to understand when they are getting into this kind of payment system.”

Examine the data and figure out how to leverage it during the negotiations. Keep in mind you’ll want to focus on including patients who are likely to have the best outcomes for the procedure. “When you do negotiations, you want a risk adjustment for your payment,” says Ms. White. “Insurance companies ask patients all types of questions about prior illness to determine the price of the premium they are going to charge the patient, which is risk adjusted. Providers should do the same before negotiating bundled payment contracts.”

3. Think like the insurance companies. Providers understand the clinical world when taking care of patients; with bundled payments, you must begin thinking like the insurance companies to negotiate terms that make sense for the providers. Figure out how you can predict which patients are most likely to succeed or are at increased risk for complications.

“You want to focus on predictability and that’s where you get into a lot of the literature search and statistical analysis,” says Dr. Caillouette. “This is something very different for providers; providers have never had to enter this world before. Now we have to understand and act in the world where actuarial and insurance companies have been for a long time.”

If providers don’t understand the data, they could accept more risk than they are able to absorb. “The biggest risk for physicians and hospitals is they are naïve to all this and they might accept risks that they shouldn’t accept,” says Dr. Caillouette. “If they are going to accept them, build in financial safeguards so they can absorb complications as they occur.”

4. Define when the ‘episode of care’ begins and ends. It’s important to define when the episode of care will begin for the bundled payment. In the IHA pilot, the episode of care began the day of surgery and extended 90 days postoperatively. It may take some time to negotiate these terms, but will ultimately be beneficial to minimize the new risk providers take on.

“There is more shared risk for the payor and provider with bundled payment,” says Ms. White. “Providers are taking on more risk than before.”

Providers are at increased risk with bundled payments because they receive a flat rate for care regardless of whether the care includes compli-
Improving Profits

4. Improving Profits

5. Complications are the provider’s responsibility, and they will occur. Every physician knows that even in the best case scenario, complications are always a possibility. Under bundled payment agreements, the provider becomes responsible for covering procedure-related complications and readmissions within the negotiated period, so be prepared.

“Complications are always going to happen,” says Dr. Caillouette. “Even in the best of circumstances, you are going to have complications. You need to develop a system that allows you to be prepared for those complications.”

6. Make sure your electronic systems are prepared for one bill. When payments are bundled, insurance companies will pay for a single negotiated rate for the episode of care. Providers traditionally billed multiple claims for each episode of care depending on the case and different providers associated with that care; it can be a big transition to coordinate billing systems into a single claim. This is one of the reasons why McKesson and Trizetto are involved in HOI’s bundled programs.

“One of the biggest challenges for payors in bundled payments has been how to adjudicate the claims,” says Dr. Caillouette. “All their systems are set up for multiple claim names per episode; now they have to load all of these different things together into a single claim yet still track the various elements that make up the total claim.”

7. Educate physicians about the new concept to increase buy-in. All surgeons must be on board with the bundled payment agreement for it to work. Since this is a new concept, and it places more risk on the providers than ever before, some surgeons may be weary of joining the new program. Physician education sessions and complete transparency will help turn the tide of trust in bundled payments.

“The biggest challenge is helping the providers understand and trust this new concept,” says Ms. White. “You have to create alignment between the physicians and hospital to agree to terms before going forward. Someone will be getting a big check and must distribute it among the others — that’s something you need to discuss.”

Be transparent with the payments, which isn’t something hospitals and physicians usually share. It may take time for both parties to become comfortable with the arrangement.

“If you can educate all the providers in terms of the concept of bundled payments so they understand that everyone is sharing risk and everyone is accountable for the entire process of care, you have an opportunity to solve your problems,” says Dr. Caillouette. “It creates a higher level of focus because there is a higher level of accountability than with other systems.”

8. Only include top physician leaders in the bundled payment program. Since all the surgeons must be aligned and understand the bundled payment program to participate, not every surgeon is going to be willing or able to join in the programs.

“You have to have the right physician leaders in the room,” says Ms. White. “Not everyone signs up for the bundle—you have to go with your ‘A’ team of providers. They also have to be leaders in change; that’s where we have been very fortunate.”

9. Take the higher administrative burden on the front end. It takes more administrative work on the front end to get programs off the ground, but once providers have experience and a high volume of patients participating in bundled payments, the burden will be lifted.

“It’s more manual work for us right now because we haven’t had enough volume to automate our systems,” says Ms. White. “It takes time to check each patient and make sure they are properly selected for bundled or not bundled payments. We have an IT system that shows us when patients are eligible for the bundle, but we still have manual checking for lab reports and medical histories to make sure they are qualified.”

After the patient is identified as eligible and qualified from the provider’s perspective, you must receive authorization from the payor to bundle their episode of care. “Currently, it is a bigger administrative burden, but as the volume increases that will go away,” says Dr. Caillouette. “If it moves in that direction, everything will become far more automated than it is today.”

Another set back is the number of payors and providers who are part of the bundled payment; there are only a select few patients, physicians and payors who are able to work within the bundled payment structure. “If all payors, physicians and patients participated, and we had risk adjusted reimbursement for all patients, the system would be a lot simpler,” says Ms. White.

10. Discuss the process with patients so they aren’t surprised with one big bill. Patients are familiar with receiving multiple bills for their care, and each sum represents the physicians and payors who are able to work within the bundled payment structure. “If all payors, physicians and patients participated, and we had risk adjusted reimbursement for all patients, the system would be a lot simpler,” says Ms. White.

“Instead of seeing smaller amounts of out-of-pocket pay, they are seeing one big sum,” says Ms. White. “It’s the same amount of money, but they are seeing it all in one payment, which could be one downfall to the plan.”

However, the one bill also has its advantages. Patients don’t have to keep track of multiple bills, so paying for their care is simplified. “From the patient’s standpoint, it’s actually simpler because they only receive a single bill as opposed to the multiple bills they get right now,” says Dr. Caillouette.

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22 Spine-Driven Ambulatory Surgery Centers

Baltimore Spine Center. Surgeons at Baltimore Spine Center perform minimally invasive outpatient spine care, such as cervical fusions and lumbar microdiscectomy. Orthopedic surgeons also perform knee and shoulder arthroscopy, rotator cuff repair and ACL repair. There are 13 physicians performing cases at the center, including four neurosurgeons. There are also pain management procedures performed at the center.

The Christ Hospital Spine Surgery Center (Cincinatti). This freestanding ASC, featuring 13 neurosurgeons and one pain management physician, is a partnership between the Mayfield Clinic, The Christ Hospital and United Surgical Partners International. When Mayfield Clinic founded the ASC in 2007, it was the first freestanding center in the region to provide spine surgery. Since then it has performed more than 10,000 spine procedures, which include single- and multi-level lumbar laminectomies, single- and multi-level anterior cervical disectomies and fusions and single-level spinal cord decompression. The surgery center features three operating rooms, one pain management suite and 11 pre- and postoperative patient rooms.

Christiana Spine Center (Newark, Del.). Physicians at Christiana Spine Center perform minimally invasive spinal procedures in their outpatient facility, which has its main office on the Christiana Hospital campus. Christiana Spine Center has been operating in that location since June 2000 and the surgery center is accredited by the Accreditation Association for Ambulatory Health Care. In addition to clinical care, the nine physicians are also engaged in research to further their field.

Citrus Park Surgery Center (Tampa, Fla.). This two-OR center covers spine and orthopedic surgery as well as pain management and plastic surgery. One of this center’s surgeons, Robert Nucci, MD, is founder of the Nucci Spine and Orthopedic Institute in Tampa. Dr. Nucci focuses on minimally invasive outpatient lumbar fusions and multi-level outpatient cervical disc replacements. He was among the first physician to actively employ Bio-Plex in his surgeries, a standard that is now used in a wide range of orthopedic surgeries.

Crane Creek Surgery Center (Melbourne, Fla.). Crane Creek Surgery Center was founded in 2008 by physicians from Osler Medical Group and Blue Chip Surgical took over management a year later. The 14,000-square-foot surgery center includes four operating rooms and two procedure rooms. Surgeons perform complex spinal procedures, pain management and diagnostic testing. In addition to the surgical facility, there is an auditorium for educational programs for the public and staff, as well as a venue for training visiting residents and physicians. The facility also includes an O-Arm Imaging System from Medtronic.

Englewood (Colo.) Surgery Center. Englewood Surgery Center is located on Colorado Comprehensive Spine Institute’s main campus and provides customized spine care. Physicians have a special interest in several areas of spine care, including minimally invasive spine surgery, cervical disc replacement and spinal fusion. The ASC includes six physicians who provide spine surgery and pain management. The practice also includes physical therapy and MRI.

Honolulu (Hawaii) Spine Surgery Center. This Symbion center involves three orthopedic surgeons and five neurosurgeons. It hosts such services as hand surgery, minimally invasive spine procedures, neurosurgery, interventional orthopedics and pain management. The 7,800-square-foot center opened in 2007. It has two ORs and a private recovery room, and provides a wide variety of equipment for minimally invasive surgeries.

Institute for Minimally Invasive Surgery (Dallas). Institute for Minimally Invasive Surgery was opened in fall 2011. The 9,255-square-foot surgery center includes two operating rooms and one procedure room. It was designed for surgeons to perform minimally invasive spine surgery and includes the O-arm Spine Surgical Imaging system with StealthStation Navigation. Minimally invasive disectomies, decompressions, cervical disc replacement and percutaneous lumbar fusions are performed at the ASC. Surgeons partnered with Meridian Surgical Partners to construct the center. It is a member of the Ambulatory Surgery Center Association.

Laser Spine Institute (Tampa, Fla.). Headquartered in Tampa, Laser Spine Institute also includes ASCs in Wayne, Pa., Scottsdale, Ariz., and Oklahoma City. Through endoscopic spine surgery, Laser Spine Institute’s mission is to expand healthcare options for patients and is help them achieve a better quality of life. Laser Spine Institute treats a variety of spinal conditions, including spinal stenosis, degenerative disc disease, pinched nerves, bone spurs, bulging/herniated discs and sciatica. It boasts an electronic medical re-
cording room with free catered breakfasts and lunches, zero-gravity chairs and computers with free Internet access.

**Mayfield Spine Surgery Center (Cincinnati, Ohio).** Founded in 2005, Mayfield Spine Surgery Center is a free-standing ASC that provides spine, neurosurgery and pain management services to the Cincinnati area. The medical staff also includes physiatrists and anesthesiologists. Procedures performed at the ASC include minimally invasive discectomies and spinal fusions. The center features three operating rooms, one pain procedure suite and 11 patient rooms. Each patient room includes amenities such as a flat screen television for the patient's pre- and postoperative stays at the center.

**Memorial Spine & Neuroscience Center (South Bend, Ind.).** Memorial Spine & Neuroscience Center offers minimally invasive spine surgery, peripheral nerve surgery and pain management procedures. There are seven physicians affiliated with the facility, which is located outside of Memorial Hospital.

**Minimally Invasive Spine Institute Health Campus (Dallas).** This 48,000-square-foot center opened in April 2011. It features four ORs, one minor procedure room and 16 recovery areas — all of which are private rooms. As part of a phased opening, it started with self-pay patients and then began accepting private insurance patients. The facility takes a holistic approach to healthcare by providing a full spectrum of treatment options, from physical therapy to surgical intervention. It is among the first in Texas to host endoscopic laser spine surgery.

**NeuroSpine and Pain Surgery Center (Ft. Wayne, Ind.).** NeuroSpine is a joint venture between neurosurgeons and the physical medicine physicians of the NeuroSpine and Pain Center and Lutheran Hospital of Indiana. Opened in January 2007, NeuroSpine and Pain Surgery Center concentrates on solutions for neck and back surgery to treat low back pain, upper back pain, neck pain and muscle pain. In addition to the center's nine neurosurgeons, the center includes physical medicine and rehabilitation specialists. The facility houses three ORs, one procedure room, 10 pre- and postsurgical rooms and six recovery beds, allowing privacy and support during recovery. Patients have the ability to stay over night if necessary.

**Parkway Surgery Center (Hagerstown, Md.).** Opened in August 2006, Parkway offers comprehensive spine treatments and non-invasive spine surgical procedures. The ASC was founded by the physicians of Parkway Neuroscience and Spine Institute. With nine physician owners and 10 surgeons performing cases at the center, it is part of the Blue Chip Surgical Center Partners network. The center includes one operating room and one procedure room where physicians perform several procedures, including facet injections, nerve blocks, laminotomy, laminectomy, discectomy and spinal fusion. It is accredited by The Joint Commission and includes an MRI and CT scan.

**Renaissance Surgery Center (Bristol, Tenn.).** This Symbion center hosts minimally invasive spine surgery, neurosurgery, pain management, plastic surgery and general surgery. Three neurosurgeons, two from Highlands Neurosurgery in Bristol and one from Bristol Neurosurgical Associates, use the center. The center is licensed by the Tennessee Department of Health Services and the Centers for Medicare and Medicaid Services. The center is led by administrator Elizabeth Trivet, RN, and business office manager Judy Cole.

**Spine Centers of America (Fair Lawn, N.J.).** Spine Centers of America, affiliated with New Jersey Back Institute, operates three surgical centers with a team of certified endoscopic spine surgeons. Founder and Head Surgeon Bryan J. Massoud, MD, has performed more than 1,000 minimally invasive spine surgeries for maladies such as cervical and lumbar disc herniations, thoracic disc herniations, spinal stenosis, failed back surgery syndrome, spondylolisthesis, scoliosis and infections. He also instructs orthopedic residents and colleagues in new procedure and endoscopic techniques. Spine Centers of America opened its new Advanced Spine Surgery Center in Union, N.J., in November 2010.

**The Spine Institute of Southern New Jersey (Marlton).** Surgeons at The Spine Institute of Southern New Jersey perform spinal surgery, which includes lumbar discectomy, lumbar laminectomy, posterior lumbar interbody fusion and anterior lumbar interbody fusion. The ASC’s staff are focused on providing one-on-one care. Orthopedic surgeons include Joan O’Shea, MD, and Steven B. Kirshner, MD. Dr. Kirshner was the first spine surgeon in New Jersey to perform lumbar total disc replacement and the first to implant a flexible rod system in 2004.

**Spine Surgery Center of Eugene (Ore.).** The Spine Surgery Center of Eugene was opened in 2007 by Glenn L. Keiper Jr., MD, founder of KeiperSpine, and several associates. Dr. Keiper has focused on motion-sparing techniques, which has helped him develop new technology for spine surgery. Physicians perform minimally invasive spine procedures. The surgery center is lead by Administrator and CEO P. Evelyn Cole, MHSA, CASC. The center is accredited by the Accreditation Association for Ambulatory Health Care.

**Squaw Peak Surgical Facility (Phoenix).** Squaw Peak Surgical Facility was founded by spine surgeon Anthony Yeung, MD, in 1998 to complement his practice, Desert Institute for Spine Care. Along with Dr. Yeung, Christopher A. Yeung, MD, and Justin S. Field, MD, are partners in the center. Surgeons at the two-operating room surgery center perform several spine procedures, including endoscopic transforaminal thoracic and lumbar spine decompression, Yeung Endoscopic Spine Surgery (selective endoscopic discectomy), mirror lumbar discectomy, endoscopic dorsal ramus rhizotomy and ablation and therapeutic injections. Injections include transforminal epidural steroid injections, facet injections, medical branch block injections and caudal injections. The surgeons also perform a dorsal endoscopic rhizotomy surgery developed by Dr. Yeung, using the Yeung Endoscopic Spine Surgery system. The surgeons are team spine surgeons and consultants for several professional teams, including the Arizona Diamondbacks, Colorado Rockies, Kansas City Royals, Seattle Mariners, Los Angeles Dodgers and Cincinnati Reds.

**St. Louis Spine Surgery Center.** Physicians investors with St. Louis Spine Surgery Center partnered with Blue Chip Surgical Partners to establish their 6,700-square-foot facility in 2007. It was acquired by Meridian Surgical Partners in February 2012 and contains two operating rooms. The 10 physicians perform a variety of neurosurgery and pain management procedures. St. Louis Spine Surgery Center is led by administrator Debbie Wooten and is located in a medical office building.

**Two Rivers Surgical Center (Eugene, Ore.).** Formerly named Northwest NeuroSpine Institute, Two Rivers Surgical Center opened in July 2006. The 7,911-square-foot facility, acquired by Meridian Surgical Partners in August 2008, was specifically designed for outpatient spine procedures, using two ORs. The facility also provides pain management procedures. Angel Kellum serves as the center’s administrator. Two Rivers Surgical Center is a Medicare-certified and recognized by the Accreditation Association for Ambulatory Health Care.

**West Park Surgery Center (Cape Girardeau, Mo.).** West Park Surgery Center was formed in association with the physicians from Brain & NeuroSpine Clinic of Missouri and Blue Chip Surgical Center Partners. Surgeons at the center perform anterior cervical discectomy and fusion, microdiscectomy, carpal tunnel, ulnar nerve transposition and pain management procedures. The surgery center includes five physicians.■
5 Points on Orthopedic Surgeon Income & Payment Models

By Laura Miller

Here are five points on orthopedic surgeon income and payment models based on the Medscape Orthopedist Compensation Report 2012.

1. Concierge practice — Only 1 percent of orthopedic surgeons said they were transitioning to a concierge practice. This is in line with physicians overall, where only 1 percent reported having a concierge practice.

2. Cash only — Another 1 percent of orthopedic surgeons have cash-only practices, which are more often found in primary care than among specialists. This is slightly lower than overall physicians, 3 percent of which reported having a cash-only practice. Driving the increase is plastic surgeons, with 15 percent having a cash-only practice, and physiatrists, with 11 percent who have cash-only practices.

3. Accountable care organizations — Currently, 2 percent of orthopedic surgeons said they are participating in an accountable care organization, with 5 percent more planning to participate in the coming year. Thirty-eight percent of orthopedic surgeons believe participation in an ACO will cause a large decline in income and another 26 percent say it would cause a slight income decline. Only 9 percent believe ACO participation would have little or no impact on their income and the remaining 26 percent said it’s too early to tell.

4. Defensive medicine cost containment — An overwhelming 76 percent of orthopedic surgeons said they would not reduce the number of tests ordered or procedures performed as a result of cost containment measures. Thirty percent said they would continue practicing defensive medicine while 46 percent said their actions were within appropriate guidelines and cost containment measures weren’t in the best interest of the patients, according to the report. Seven percent said they would reduce testing and procedures because it affects their income and another 16 percent said they would reduce testing and procedures because the guidelines are valid.

5. Cost of treatment conversations — Around 32 percent of orthopedic surgeons said they regularly discuss cost of treatment with their patients, while 58 percent occasionally discuss costs if the patients raise the topic. Eleven percent of orthopedic surgeons don’t discuss cost of care with patients, either because they don’t feel it’s appropriate or they aren’t aware of treatment cost.

15 Statistics on Orthopedic Surgeon Compensation in 2011

By Laura Miller

Here are statistics on the number of patient visits orthopedic surgeons have per week and the amount of time they spend with each patient, according to the Medscape Orthopedist Compensation Report 2012.

Compensation by employment setting
Orthopedic surgeons who were employed by healthcare organizations received the highest average compensation last year. However, orthopedic surgeons in single-specialty or multispecialty groups both received more than the average hospital-employed orthopedic surgeon. The lowest average compensation went to orthopedic surgeons employed in an academic setting.

1. Employed by a healthcare organization: $427,000
2. Single-specialty group or practice: $391,000
3. Multi-specialty group or practice: $340,000
4. Solo practice: $256,000
5. Hospital employment: $251,000
6. Academic setting: $225,000

Compensation compared to last year
Around a third of orthopedic surgeons saw no difference in income between 2010 and 2011, which was also true for 40 percent of physicians in all specialties, according to the report. This number is down from the 2010 survey comparing 2009 income to 2010 income, where around 50 percent of surgeons reported no change.

7. 36 percent of orthopedic surgeons saw compensation decrease in 2011
8. 34 percent reported no change over 2010 compensation
9. 30 percent of orthopedic surgeons reported compensation increase in 2011

Compensation by gender
Male orthopedic surgeons made 36 percent more than female orthopedic surgeons in 2011. However, both groups reported significant declines in average income compared with 2010. Male physicians across all specialties report 40 percent higher compensation than female physicians.

10. Males orthopedic surgeons: $326,000
11. Female orthopedic surgeons: $240,000

Compensation compared to other professions
The majority of orthopedic surgeons don’t consider themselves rich, partially due to their high expenses and debt, which off-set compensation. Half of orthopedic surgeons felt they were unfairly compensated, a slight decrease from last year when 53 percent felt unfairly compensated.

12. 42 percent of orthopedic surgeons don’t consider themselves rich
13. 12 percent of orthopedic surgeons do consider themselves rich
14. 47 percent of orthopedic surgeons said their income may qualify them as rich but debt and expenses mean they don’t feel rich
15. 50 percent of orthopedic surgeons feel fairly compensated, which means 50 percent feel they are unfairly compensated as well.
Technology is revolutionizing how sports medicine teleradiology is practiced. You can now examine an injured athlete, obtain an MRI using your in-office MRI, review the MRI with your personal sports radiologist during an online session on your tablet computer or cell phone and obtain a finalized report, all within one hour.

1. In-office MRI scanners. In-office MRI scanners are now a standard part of many sports medicine practices. A dedicated sports medicine teleradiology company can assist you in selecting in-office MRI scanner based on the anatomic coverage requirements and the restrictions of your office environment, such as structural restrictions and space availability. A sports medicine teleradiology group can also provide supervision of your MRI scanner and serve as the “Supervising Physician” as required by MIPPA accreditation standards (Medicare Improvements for Patients and Providers Act).

2. Cloud computing. Cloud computing is a game changer in sports medicine. No local servers or software are required. You transmit your images to a HIPAA/HITECH compliant sports medicine private cloud and receive your finalized reports right on your SmartPhone or tablet computer.

8 Points on Teleradiology for Sports Medicine

By Douglas Smith, MD, President of Musculoskeletal Imaging Consultants

What equipment do I need to use RadCloud?
...Nothin’ But Net Baby!
Personal Expert Orthorads
“We’re Rad to the Bone®”

World Class Readings for World Class Athletes

- Champions Trust MSKIC – There’s Mountains of Evidence
- Gold Medal Service – High School or Olympic Athlete
- Can the Injured Athlete Continue Competition? Immediate Disposition During Simultaneous Online Conference with Team Doc, Trainer and Radiologist

Making the Complicated Simple!

- Technical Requirements? …..Nothing but Net
- Your Personal Radiologist in the Palm of Your Hand
- Seasoned Clinical Radiologists: Remember the Good old Rays?

Lightning Fast Reporting

- Scanner To You Within Minutes
- Your Personal Radiologist Just One Click Away
- Enlighten Your Patient, Impress Your Colleagues and Appease Insurance Verifiers

Feature Documentary
“Inside Business with Fred Thompson”
3. **Immediate reporting.** Your MRI images are transmitted to the sports medicine Cloud as they are acquired. Your personal team radiologist reads the study, annotates key images that display the pertinent findings, and dictates a final report within minutes using voice recognition technology. You immediately receive a text message or email that the report is available for review and viewable right on your SmartPhone or tablet PC (or within your EMR).

If you want to consult with your radiologist, a simple icon click initiates a real-time online consultation session during a secure screen sharing session right on your tablet. Before the athlete can return to the exam room, you have a finalized report with attached key images and have all your questions answered. A sports medicine Cloud can also provide offsite archiving required by HIPAA/HITECH.

4. **It’s available with both in-house and MRI examinations you send out to imaging centers.** Even if you don’t have an in-office MRI, you can have your local imaging center send your athlete’s studies to the sports medicine Cloud. Even if you send to multiple imaging centers, all your patients will appear on your personalized PACS display on the sports Cloud if they send to the sports medicine Cloud for reading.

5. **Athlete privacy management:** Once you have the finalized report, there are many non-medical people that want access to the report and information about when the injured athlete can return to competition. Trainers, coaches, team representatives, media and fans and even gamblers all have an intense interest in the outcome of medical evaluation. The athlete’s privacy must balanced against the desires of non-medical parties for information. Disclosure of protected health information (PHI) is controlled by complex regulatory requirements including of FERPA (for student athletes), HIPAA or contractual employment agreements (including collective bargaining agreements for professional athletes).

In many cases, a signed disclosure release may be required from the injured athlete (or parent). A HIPAA compliant release must be time-limited and include specifics about what information may be disclosed, to whom and for what purpose with a mechanism for the athlete to withdraw permission. A cloud-based, athlete privacy control service such as Elite Athlete Imaging can assist the team physician in managing the athlete’s privacy controls and assure that everyone has a current medical information disclosure and that online access is granted only to individuals authorized by the athlete.

6. **Cloud-based athlete privacy management.** The athlete (or designee) completes a questionnaire to determine which regulatory controls govern the athlete’s ePHI. The injured athlete then completes an online disclosure authorization directing what ePHI can be released, to whom, for what purpose and for how long. The athlete can withdraw the information at any time. The athlete is given an option to send a secure email link to designated recipients that allows the authorized recipient to download the approved ePHI from a secure server.
7. Discrete expert radiology opinions. At times professional athletic teams and/or player agents need an unbiased opinion from the leading sports radiologists in the country. There may be a disagreement about the significance of an imaging finding between two teams or a payer and a team with millions of dollars in contract payment in dispute. Using an elite athlete imaging cloud, unbiased opinions can be obtained from the leading sports radiologists in the country that are blinded from the identifying information of the athlete’s identity and the teams involved while reading the study.

8. Discrete athlete imaging. Many elite athletes are terrified that the results of their ePHI will be leaked to the media and jeopardize contract negotiations or opportunity to compete. The “best practice” for elite athlete imaging is to assign an identification number to the athlete rather than identifying information such as name at registration. The athlete is only referenced to by the identification number throughout the process. None of the imaging center staff or the radiologists know the identity of the patient or the professional sports teams involved. This will help the athlete to have complete control over privacy.

Contact Sports: “You Should Have Your Head Examined”

By Douglas Smith, MD, President of Musculoskeletal Imaging Consultants

Head injuries are a ubiquitous part of competitive sports and sports medicine. The annual incidence of mild traumatic brain injury in football ranges from 4 percent to 20 percent and there is a much higher rate of a second brain injury in the first two to three weeks following the first concussion during the recovery phase when a second concussion can result in death from Second Impact Syndrome (SIS).

Recent episodes of high profile athletes with head injury have caught the attention of sports media, the general public, athletes and those that care for them (parents, agents, fans, sports franchises and insurance companies). Repeated concussive episodes can produce long term adverse effects including mental deterioration, depression or death. Until recently, neuropsychological testing was the only method for evaluating concussions. Functional magnetic resonance imaging (fMRI) can be used to evaluate the effects of a concussive head injury on vulnerable areas of the injured brain. The injured athlete is stimulated by a series of visual and auditory stimuli and elicited responses are obtained that stimulate portions of the brain that have a different appearance in the post-traumatized brain than normal brain. fMRI is being used to evaluate high profile athletes where there is a high economic or competitive need for the athlete to resume high impact sporting activities but also a need to objectify the impact on the athlete’s brain from recent or cumulative head injuries (i.e. professional or elite amateur athletes).

fMRI is not available on all MRI scanners and requires additional equipment and neuroradiologists with additional training and experience to render an accurate opinion of the specialized MRI images.

“Teleradiology has revolutionized how we practice sports medicine,” says David Schmidt MD, San Antonio Spurs team physician.

Explore how your practice can leverage sports medicine Cloud computing to improve the efficiency of your sports medicine practice. Real time, online consultation with your personal expert sports medicine radiologist is like having your own personal imaging expert right in your office.

Musculoskeletal Imaging Consultants is a physician centric, orthopedic, spine, and sports medicine teleradiology company. Our innovative technologies allow “Scan to Plan within An Hour” and are featured on Sports Medicine Cloud.com and Elite Athlete Imaging.com.

Global Teleradiology Market to Grow 19.3% to 2015

By Laura Miller

The global market for teleradiology is expected to grow at a CAGR of 19.3 percent through 2015, according to a report from TechNavio.

The growth will be driven by advancements in digital technology in remote patient diagnosis and a growing focus on vendors offering mobile health services. However, the report also sees a lack of common standards as representing a degree of uncertainty in teleradiology which could impact growth.

As the market for radiology equipment and teleradiology grows, physicians must stay updated with appropriate documentation to reach accurate CPT codes so the radiologists don’t lose money. A recent study published in the Journal of the American College of Radiology examined nearly 12.7 million radiology reports from 37 practices to identify and analyze abdominal ultrasound reports.

The researchers found that 75.1 percent of the reports documented all eight elements for CPT coding as complete examinations, 7.7 percent documented seven elements, 5.6 percent documented six elements, 4.8 percent documented five elements and 13.5 percent documented four or fewer elements.

There were incomplete reports and undercoding in 2.5 percent to 5.5 percent of lost income, according to the report. The study’s authors advised structured reporting might improve documentation.
10 Steps for Spine Surgeons to Negotiate Best Vendor Contracts

By Laura Miller

Adam Higman of Soyring Consulting discusses 10 steps for spine surgeons and groups to take when negotiating contracts with implant vendors.

1. Decide whether to consolidate vendors. The first thing spine groups should do to prepare for vendor negotiations is pull data from their internal system to get an idea of which vendors they are using and how much each implant costs. Based on that information, decide whether it makes sense to continue using a wide variety of vendors or if the group can consolidate to realize savings.

“The first thing spine groups have to do is have a good lay of the land,” says Mr. Higman. “Make financial decisions about whether it makes sense to use the same mix of vendors or if you can get a better deal with consolidation. Or, you may want to introduce new vendors into the mix.”

2. Bring all partners together for a discussion on preference items. In situations where one leader usually represents the whole group, it’s smart to have a meeting with all partners to discuss potential consolidation before making the first move. All surgeon partners should be part of the discussion so preference items don’t suddenly disappear without an explanation.

“It’s a good idea to have a sit down meeting with every practitioner involved to get an idea of what their ‘must haves’ are and what they are willing to negotiate,” says Mr. Higman. “Sometimes they will feel no difference between two or three vendors.”

It might be necessary to identify items among the physician group that are unique and you are willing to pay a premium for, but keep the discussion behind closed doors. “Don’t tell the vendors which items you are willing to pay a premium for, but you should know what the novel technology is that you really want to keep using,” says Mr. Higman. “Keep that in mind when you are picking your vendors.”

3. Standardizing pricing information and set caps. To prepare for the actual negotiation, figure out the standard price in your area for each device and set a price cap you aren’t willing to exceed. This works best if the practice is larger and can offer the benefit of volume to the vendor, who may need to lower the price of a titanium screw or implant based on your price cap.

“There are some times when you might need to play hard ball, and be careful because it might not go your way,” says Mr. Higman. “In that case, evaluate the market share and figure out where there are opportunities.”

4. Make a demand for implant savings and stick to it. Tell vendors you are looking to see specific margins to save a certain amount in the upcoming year, which means you are looking to cut materials cost by for example 10 percent, and ask them what they can do for you. Making these types of demands could help streamline the conversation to the right price range, but you have to be sincere about your commitment to saving.

“Don’t make the demand unless you are really willing to switch vendors to get what you want,” says Mr. Higman. “If the vendor can’t deliver, explore the other options you have in the market.

5. Meet with vendors face-to-face. When you are first beginning to scope out the market, reaching out by phone can make the initial connection. However, when you are ready to negotiate, meet with the vendors face-to-face to get the real pricing done. The number of vendors you meet with will vary depending on your market and practice size.

“If you are in a rural area or part of a smaller practice, your options are more limited,” says Mr. Higman. “You might have three vendors to reach out to instead of 10, but face-to-face meetings are still the best way to go.”

6. Prepare for a long negotiation. As with any negotiation, you won’t want to take the first offer from your vendor. Oftentimes, you won’t even want to take the second. Be prepared to spread the back and forth negotiations across several weeks or months to get the best contract.

“Folks will expect that they can save a certain amount of money or come to an agreement in a month while in reality it could take three or four months,” says Mr. Higman. “Be prepared for negotiations to happen back and forth.”

7. Highlight practice strengths during the negotiations. Implant vendors are dependent on physicians and physician groups for their business, so don’t be afraid to highlight the group’s strengths in explaining why you want to negotiate a lower rate. For example, if you are a larger group, you could provide the vendor with more business. If your surgeons have influence in the community and spine field, their use of the product will also be valuable to the vendor.

“The more business you provide the vendor, the more demands you can make,” says Mr. Higman. “Leverage can also come from prestige. Are you a well-known surgeon and do you engage in a lot of research? Do you work out of large centers where you have pull as to what they purchase? I would encourage folks to take that seriously.”

When surgeons are engaged in research, their name becomes more prevalent in the spine space and they evolve into spine thought leaders, which will give them more leverage with implant vendors as well.

8. Understand market fluctuations. There are differences in implant and materials prices based on market location. Just because a surgeon in Iowa can get one price doesn’t mean a surgeon in New York should try to negotiate the same rate.

“Cost of living calculates into what you pay in terms of product prices,” says Mr. Higman. “I’ve seen it where someone talks to a friend in another part of the country and then demands the same rates. Vendors can’t always meet these demands because they have different bottom lines for various reasons.”

9. Set reasonable goals from the vendor’s perspective. When you set your goal, make sure it’s reasonable for the vendor to meet. Your sales representative is making a commission from their sales, and proposing a 30 percent to 40 percent cut on their pricing can have a huge impact on their business and your relationship with them.

“Vendors want your business, but there are nuances to this relationship you have to keep in mind,” says Mr. Higman. “The people you are talking to across the table are an important part of the equation — not just the company they represent. You want these people to be reliable. If you have a last minute case and you need another implant set, you want to make sure they’ll be available for you.”

10. Bring in a third party group purchasing organization. If you are really having trouble with your pricing, joining a GPO or working though another third party group could give you a baseline of where your pricing should be. These groups can also provide rates available exclusively to their members.

“If you are starting a practice and you don’t have good insight into what you should be paying, it’s not a bad idea to get some kind of baseline,” says Mr. Higman. “You can go to a GPO or consulting firm to figure out these baselines.”

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Innovation in Spine Technology
Post Healthcare Reform: Q&A With Dr. Dennis Crandall

By Laura Miller

Over the past decade, spine care technology has exploded. Surgeons and engineers have contributed to new innovations, some of which have revolutionized the field while others haven’t been proven in the literature. However, there is a large category of innovation that has a great potential to help patients, but without the appropriate funding this technology won’t be developed or become available on the mainstream market. This becomes even more evident as we move closer to a two-tiered healthcare system in the United States.

Question: Where is the biggest innovation happening now?

Dr. Dennis Crandall: Everything is happening in biologics. There are some cool computer monitoring that we are involved in to try to identify where the stress in the bone is when we instrument the spine for degenerative disc disease. Our population is aging, so there is a lot we are doing there. Our thinking is, if we come up with these wonderful new techniques that are good for the bone, is there going to be a market place for that, especially if the payer is Medicare?

Q: Will the market be able to sustain all this new technology?

DC: One concern that a lot of us have is that new technologies burst onto the scene with a lot of enthusiasm, and intellectually they have a lot of promise, but the data backing these new technologies isn’t always there. As a result, the discriminating spine surgeon is left to his or her own intuition as to whether it something they want to try. Based on surgeon skill and background, the surgeon will make a decision about whether the new technology merits a try at achieving a step forward for their patients. I think that’s part of the reason why some technologies seem to splash onto the scene in a big way and then go away just as quickly.

Then the data arrives and the initial intuitive beliefs aren’t born out in actual reality. We continue to see that in spine surgery as a specialty because it is relatively underdeveloped and immature. It isn’t like the total hip and knee markets where they are highly developed and incremental gains are much smaller. In the spine market, there is a lot we don’t know and a lot we are still discovering.

Q: How can surgeons tell which innovations are the most important?

DC: Surgeons have a lot of good options with patients to achieve good results. Over time, we will see fewer technologies that are embraced long term because they are supported by the data. The spine industry right now is at the same point as the total hip and knee industry in the early 1980s in terms of research and development.

Q: How will healthcare reform impact spine surgery and technology in the future?

DC: Regardless of whether Obama or the Republicans win re-election, healthcare reform is coming in some shape or form, and healthcare delivery will take the shape of paying for accountable results. In my view, we will emerge with a segment of healthcare being under the title value segment and a smaller segment of healthcare being under the title of innovation. The “value” segment is the segment of the population that has straight forward disease that can be treated with straight forward procedures, technology and implants; these are less costly interventions. This will be the choice of cost containment efforts whether through Medicare or other insurance companies — they will choose low-cost technology, which seems to do the job.

There will be a segment of spine disease that doesn’t lend itself to value proposition; those patients — spinal deformity and more complex cases — fall under innovation. They are going to benefit from high levels of technology that produce results. For these patients, generic implants or technology won’t be as good; instead, more expensive technology that I hope will still be funded will provide better care. We need the funding so we still have innovation and advancement in the care we provide.

I think the generic devices will emerge as the primary technology and spinal implants and devices we have at our disposal to treat most patients, particularly those with degenerative disc disease.

Q: What challenges could arise from grouping into the “value” segment and “innovation” segment of the two tiered system?

DC: If we go to the two tiered system, the people who have access to the innovation segment will be the people with the latest and greatest healthcare surgery techniques and technology. The question is whether their outcomes will be truly better — I think they will be. But how much are we willing to pay for incremental improvements in outcomes? If it’s your back, you want it; but if you are paying for someone else, maybe it isn’t quite as important.

Right now, the industry is heavily weighted toward innovation — I don’t think the faucet has been turned off for new technologies or companies yet to develop whatever is next on the horizon. The question comes with what happens with healthcare reform and the dramatic shrinking of healthcare dollar resources. If the companies are not getting reimbursed for their technology, they can’t continue to develop it and do research that would lead to the next big thing. Then we will settle into a vast pool of mediocrity in healthcare whereas we’ve been a leader in innovation in the world.

It might have to be private insurers that promote innovation in the future.

Q: How will the population divide into the two segments?

DC: Off the cuff, I would estimate we would end up with about 70 percent of the population in the value segment and 30 percent in the innovation segment with access to new technology — and that may shrink over time. We might get to the point where the innovation segment would be 10 percent of the market, if the value segment produces care that the population thinks is good enough. If this is the case, there wouldn’t be a push to fund the innovation segment. When generic implants do a good enough job, people stop paying for the brand name.
Right now, people are looking at journal articles and making decisions about payment based on the numbers in high quality studies. They say they will cover a technology for a specific indication because there is data, or they won’t because the data isn’t good enough or there isn’t enough data. Until there is data saying that the technology provides good outcomes, the value system won’t accept it.

The innovation segment would accept the technology if patients and physicians think its best.

Q: What impact does the focus on cost containment and development of generic implants have on innovation?

DC: Whether it’s Medicare or another version of government payor, if they really want to cut costs they won’t support innovation in a meaningful way. They would support the value segment and fund specific costs for implants.

For instance, minimal access surgery and biologics involved in a sacroiliac joint fusion or spinal deformity implants are more elaborate and evolved than generic implants. Anything that is more evolved than the typical generic implant would fit into the innovation segment and if it is better than the traditional treatment, we have to show the value of cost. It has to decrease pain, shorten operating room times and have more reliable outcomes than the standard treatment. That will be the way they decide whether to pay for the incremental improvement of the technology.

When that day comes, we are in trouble because we will sink into mediocrity.

Q: Will surgeons still be able to engage in research and innovation in the two-tiered system?

DC: A lot of surgeons are like me and do research truly for the fun of it; its great fun thinking and developing new technology to treat patients better. I envision a scenario where I would continue to tinker and think of new things with engineers even if the funding isn’t there, but at some point to get the ideas off the paper and computer and into biomechanical testing, regardless of how altruistic I am, it won’t be made or tested if it can’t show improvements.
Eric Major, President and CEO of spine device company K2M, discusses where spine technology is headed and his company’s plan for success in the future.

**Question:** What factors are driving change and innovation in the spine field today?

**Eric Major:** Overall, we are seeing an aging population that demands a higher level of activity. From a technology perspective, we are seeing continued focus on minimally invasive approaches for treating diverse pathologies, from degenerative conditions to complex spinal pathologies. Patients and surgeons are demanding minimally invasive alternatives to treatment approaches. From an industry perspective, we are seeing an increased focus on sagittal balance as it relates to spinal deformities and looking at how to treat and maintain balance in deformities such as scoliosis.

**Q:** How has K2M adapted to the market demands?

**EM:** Our core competency is in the area of treating the most difficult pathologies. That inspired our product managers, engineers and surgeon designers. From the very beginning, the conceptual approach for our systems was to treat difficult pathologies and deformities. It’s very exciting for us to treat challenging scoliosis patients with our minimally invasive SERENGETI and RAVINE platforms.

**Q:** In your experience, what types of procedures and devices are most popular right now?

**EM:** From an industry perspective, we are seeing better technology across the med tech field. There are enhanced imaging technologies that provide more data input for surgeons and allows them to identify issues earlier and possibly prevent the cascading effects of advanced pathologies. You are able to identify spinal pathologies earlier in the patient’s care and obtain more information about their condition; as a result, surgeons can treat them differently than if their pathology had progressed further.

**Q:** What factors surround the development and release of new technology today?

**EM:** There continues to be an increasing number of factors that we have to weigh as a medical device innovation company in the development of new technology. This includes:

- Food and Drug Administration regulatory process
- Global financial market — understanding the needs of technology in various markets around the world
• Reimbursement factors that are different around the world

• Geopolitical environments and how that impacts reimbursement

The regulatory process, combined with reimbursement around the world, has an impact on what we develop and where we introduce these technologies. For example, the costs associated with the regulatory approval process in the United States has become cost prohibitive with regard to certain technologies.

We have also seen a continued focus on evidence-based medicine, specifically in the area of complex spine surgery and achieving sagittal balance. It’s a global issue to address deformities because everyone is challenged with these types of cases.

Q: Where has K2M recently experienced challenges and successes in the market?

EM: In a disproportionate way compared to other companies, we are seeing growth in the United States as well as significant growth in Europe and the Asia Pacific markets. We have been able to provide products that are in demand in these areas and addressing the needs of patients and physicians in each specific market, which drives our growth. We are also adding products to provide surgeons with more versatility in treating a wide variety of individual patients. I’m a firm believer that surgery is a unique decision-making process on a surgeon-by-surgeon basis and we need to provide surgeons with various options because surgeons determine how they want to treat individual pathologies.

It’s our job to provide surgeons with the necessary instrumentation to treat those pathologies. We are broadening our surgical fixation profile to provide neurosurgeons and orthopedic spine surgeons with a broader range of options for treating patients who need surgical operations. We are also providing an increased number of alternatives both in the types of implants and types of instrumentation used by the surgeons.

Q: Where do you see the spine device field headed in the future?

EM: The ongoing discussion around healthcare policy is going to impact medical technology everywhere, not just with spine. Regulatory approval and reimbursement rates will impact the ability of companies to bring products to the market. The other thing we are looking at is the aging and active population, which demands innovative technologies at a very competitive price level. It’s important to help surgeons treat an increasing number of patients at a competitive price; that is where the industry will move.

I think we’ll see a combination of developing innovative technology and making an effort to understand the economics of the situation for all constituents involved. It’s important for us to understand hospital reimbursement as we are developing new products and know how insurance company coverage rates impact those hospitals. Those factors effect how we are able to bring technology to hospitals, physicians and insurers. We consider all of them when we are looking at the economics of the spinal med tech market.

Q: What is K2M doing to prepare for the future?

EM: What really drives us is our focus in the area of treating complex spine and the minimally invasive approach for providing those technologies to patients. Sagittal balance is paramount in developing new innovative technologies. Minimally invasive platforms for surgeons are also a critical component for the area of spine. What drives us is treating complex spine through the minimally invasive approach. I’m very bullish on the future of spine and medical technology from an innovation perspective. What excites me the most is knowing that we will continue to discuss, design and introduce new technologies inspired by the needs of surgeons to help them provide new technologies for their patients.

10 Milestones for Spine Devices & Implants

By Laura Miller

Spinal orthopedics company AxioMed completed the final closing of its Series D financing to raise $5 million from current and new investors.


Salt Lake City-based Crocker Spinal Technologies has been chosen to develop and market a new biomedical artificial disc for treating patients with chronic back pain. The device was developed by Brigham Young University engineering professors and an alumnus, who designed the device to duplicate the natural motion of the spine.

The U.S. Department of Justice announced it would end its four-year investigation related to off-label use of Medtronic’s Infuse for spinal fusions. Surgeons are able to use the product off-label but the device company cannot market the product for off-label use.

Paradigm Spine announced two key findings based on its IDE trial for coflex, showing that coflex patients experienced shorter operative times, lower estimated blood loss and shorter length of stays than patients undergoing spinal fusion.

Pioneer Technology’s nanOss Bioactive bone graft was successfully implanted into a human. The bone graft uses proprietary nanocrystalline hydroxyapatite and collagen-based biopolymer to promote bone growth in the posterolateral spine.

SI-BONE announced the company has exceeded 100 surgeons in Europe trained in the iFuse implant system for minimally invasive sacroiliac joint surgery. The company expects to train an additional 100 surgeons in Europe over the next 12 months.

A German District Court in Mannheim dismissed Synthes’ patent infringement claims against Spinal Kinetics related to the company’s M6-C cervical and M6-L lumbar artificial discs for treating patients with degenerative disc disease.

SurgLine signed a three-year agreement to offer its low-cost surgical products to Castegate Holdings, which will provide the products to rural hospitals, ambulatory surgery centers and physician groups in California.

InterFuse, developed by Vertebral Technologies, has been implanted over 2,000 times worldwide. The company also announced the 100th use of its InterFuse T for transforaminal lumbar interbody fusion in the United States.
Orthopedic sports medicine physician Scott A. Bissell, MD, recently joined the staff at St. Francis Hospital and Medical Center in Hartford, Conn.
Pediatric orthopedic surgeon P. Christopher Cook, MD, joined the University of Rochester (N.Y.) Medical Center’s Golisano Children’s Hospital after previously practicing at Dartmouth-Hitchcock Medical Center in Lebanon, N.H.
Banner Health’s Ogallala (Neb.) Community Hospital and Ogallala Medical Center recently welcomed Van Wahlgren, MD, an orthopedic surgeon with a special interest in sports medicine and adult reconstructive surgery. Hawaii-based orthopedic surgeon Vivian Chang, MD, has agreed to be hired as an interim orthopedic surgeon at Lewis County General Hospital in Louisville, N.Y., after Dwight Campbell, MD, retired from the hospital.
Anders G. J. Rhodin, MD, an orthopedic surgeon, recently joined Southern Vermont Medical Center in Bennington.

Penobscot Valley Hospital in Lincoln, Maine, hired orthopedic surgeon Philip Scaglione, MD, who is the hospital’s first full-time general orthopedic surgeon.

The practice of Tom Mattrka, MD, has been acquired by CMH Regional Health System/Clinton Memorial Hospital and will be renamed Performance Orthopaedics and Sports Medicine.

Douglas Bolda, MD, an orthopedic surgeon who previously served as chief of orthopedic surgery in the USAF Medical Corps, joined the staff at Parkview Noble Hospital in Kendalville, Ind., and Parkview Physicians Group.

Spine surgeon Steven J. Cyr, MD, has joined The Orthopaedic and Spine Institute in San Antonio after completing a spine fellowship at Mayo Clinic in Rochester, Minn.

AtlanticCare Regional Medical Center in Atlantic City, N.J., welcomed Stephen J. Zabinski, MD, an orthopedic surgeon with a special interest in joint replacement, sports medicine and minimally invasive procedures.

Omer Mei-Dan, MD, an orthopedic surgeon with a special interest in sports medicine, recently joined the University of Colorado in Boulder.

St. Francis Hospital and Medical Center in Hartford, Conn., welcomed James T. Mazzara, MD, who will be affiliated with the Connecticut Joint Replacement Institute at St. Francis.

Leewston, Maine-based St. Mary’s Center for Orthopaedics has welcomed Bruce Hamilton-Dick, MD, a sports medicine physician.

Spine surgeon Jared Brandoff, MD, joined White Plains Hospital in New York City, after completing a fellowship at the Spine Institute of New York at Beth Israel Medical Center.

Orthopedic surgeon Eric Nelson, MD, joined Memorial Hospital in Oconto Falls, Wis.

Atlanta-based Peachtree Orthopaedic Clinic welcomed Walter B. McClelland, Jr., MD, an orthopedic surgeon with a special interest in hand, shoulder and elbow surgery.

Sports medicine surgeon Steve Yao, MD, joined Hope Orthopedics in Salem, Ore., after experience in the U.S. Air Force Medical Corps.

Birmingham, N.Y.-based UHS Medical Group Orthopedics welcomed David Gallagher, MD, who completed a fellowship at SUNY.

Orthopedic surgeon Lynanne Foster, MD, joined Cleveland (Texas) Regional Medical Center and is the first female orthopedic surgeon to join the team.

Mark L. Mudano, MD, an orthopedic surgeon with a special interest in joint replacements, joined Effingham Hospital in Springfield, Ga.

Hand surgeon Kevin Lutsky, MD, joined Rothman Institute in Philadelphia after completing a microvascular surgery fellowship at Washington University and Barnes Jewish Hospital in St. Louis.

Atlanta-based Southern Orthopaedic Specialists welcomed Douglas Kasow, DO, an orthopedic surgeon with a special interest in adult degenerative cervical and lumbar spine pathology.

Michael H. Rieber, MD, an orthopedic surgeon with a special interest in minimally invasive joint replacement, gender specific knee replacement, cartilage restoration and sports medicine, joined Malo Clinic Health & Wellness in Rutherford, N.J.

Mercy Medical Group in Folsom, Calif., hired Daniel Anderson, MD, and orthopedic surgeon with a special interest in pediatrics, sports medicine and joint replacement.

John A. Gillen, MD, joined New Century Orthopedics of Pittsburgh, where he has a special interest in orthopedic hip and spine surgery.

By Laura Miller

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Meridian Surgical Partners. bbacon@meridiansurg.com | khancock@meridiansurg.com / www.meridiansurgicalpartners.com / (615) 301-8142 (p. 7)

Musculoskeletal Imaging Consultants. info@msktelerads.com / www.msktelerads.com / (866) 690-0008 (p. 38, 39, 40, 41)

National Medical Billing Services. adenal@ascoding.com / www.ascoding.com / (866) 773-6711 (p. 15)

Pinnacle III. info@pinnacleiii.com / www.pinnacleiii.com / (970) 685-1713 (p. 10)

SourceMedical ASC Billing Service. info@sourcemed.net / www.sourcemed.net/revenue-cycle / (800) 719-1904 (p. 11)

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SRS Soft. info@srssoft.com / www.srssoft.com / (800) 288-8369 (p. 9)

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