



**Eric Truumees, MD**  
William Beaumont Hospital and the  
Beaumont Comprehensive Spine Center  
Royal Oak, MI

## MESSAGE FROM THE MEDICAL EDITOR

# Where Will We Be in 2009?

“Change is the law of life. And those who look only to the past or present are certain to miss the future.”

John F. Kennedy, American politician and 35th President, 1917 – 1963

“Now is the accepted time, not tomorrow, not some more convenient season. It is today that our best work can be done and not some future day or future year. It is today that we fit ourselves for the greater usefulness of tomorrow. Today is the seed time, now are the hours of work, and tomorrow comes the harvest and the playtime.”

W.E.B. DuBois, American writer, historian, civil rights activist, 1868 – 1963

“Is it ignorance or apathy? Hey, I don’t know and I don’t care.”

Jimmy Buffet, American singer, writer, businessman, born 1946.

---

**With the transition to a newer, more nimble leadership structure in place, Dr. Branch outlines the most important issue of his tenure, the demonstration of value in spine care.**

---

As we put the final touches on the final *SpineLine* for 2008, we look back on a year of dramatic change and look forward to a year that promises even more change. Some of us face these changes with eager anticipation. Others view the coming years with fear and trepidation. Many of us have seen our investments and retirement plans lose significant value in the last couple of months. Just before that, our real estate investments took a dive. So, what does 2009 have in store? More financial pain? A turning of the fiscal crisis?

This issue begins with the changes here at NASS with a message from our incoming president, Charles Branch. Taking over from now immediate Past President Tom Faciszewski, Dr. Branch was until recently the editor of *The Spine Journal*. Here, Dr. Branch updates us on the changes to the NASS leadership. With the transition to a newer, more nimble leadership structure in place, Dr. Branch outlines the most important issue of his tenure, the demonstration of value in spine care. Demonstrations of value may determine whether our procedures will be “covered” at all. In Germany today, these measures are used to establish levels of

reimbursement.

Dr. Branch acknowledges the massive effort in networking with allied societies, literature review and communications that will be required to “prove” the value of what we do. In this effort, the importance of physician volunteers within NASS is acknowledged. Dr. Branch notes that the critical work in supporting our efforts is performed by the NASS staff. This outstanding, but under-acknowledged group gets recognition in his piece. It is important to know who they are and gradually come to an understanding of what they do. I would like to take this opportunity to acknowledge Pam Towne. She has the difficult job of keeping dozens of committee members and dozens of authors and reviewers on task and (close to) on time. The phrase “herding cats” comes to mind. I have worked on a number of publications and I can tell you, she is the best. With the help of Kelly Dattilo, she is the reason you have another excellent issue of *SpineLine* before you.

On the positive side, medicine, in general, is recession resistant. As spine specialists, we will not see the tidal wave of layoffs already underway in other sectors of the economy. Recognition of the basic stability of a career in

medicine has led to some college students toward the "safer" career in medicine.

The Association of American Medical Colleges (AAMC) recently reported a record enrollment of 18,000 students, representing a 2% increase over 2007. The AAMC states that many medical schools are increasing their enrollment levels in response to increased demand for physicians. With the aging of the population and the increase in part-time practitioners, the need for doctors will no doubt rise.

On the other hand, with the value of investments and retirement funds tanking, many physicians may be deferring retirement for a few years. Recent reports from Massachusetts General and other lofty institutions suggest that in a poor economic climate, patients put off elective procedures and surgery. Visits to all medical specialists and dentists are down.

What kind of career will all these newly minted doctors face? For one, their training may look very different from previous generations. While strict enforcement of resident work-hour rules began several years ago, more changes are likely on the way. These changes will further decrease the numbers of continuous, sleepless hours a physician-in-training may work. Perhaps, more "night float" or physician extenders will be required. Will these changes lead to a rift between generations of doctors?

My grandfather received his surgical training at the Charité Hospital in Berlin. Even as a small child, I remember him explaining that modern doctors were "no good." Anyone trained after 1940, in fact, had been overly coddled. My grandmother, also a physician, expressed disappointment that I'd been admitted to an American medical school without fluency in ancient Greek and Latin. "They'll take anyone these days," was her response to my proud announcement.

Each generation of physicians has looked somewhat askance at the generations following. No one worked as hard as they did, of course. But other problems were cited also. The physical exam has become "a lost art" because of an over-reliance on tests and imaging. Of course,

---

**With all of the new technology available in the operating room and procedure suite, we have made few gains on the diagnostic front.**

---

everything we do is built on the giants that came before us. But, we have advanced the science and art of medicine and virtually everyone from the Congress to Joe the plumber expect us to continue to do so.

One story heard increasingly from recently graduated residents and fellows includes broken employment promises and multiple job changes. Are these changes the result of fresh doctors with overly inflated expectations or are groups trying to squeeze their new hires for additional profit?

In this issue's Practice Management column, Dr. Ali Moshirfar distills the cogent advice from a lecture series he's been giving graduating residents and fellows. He discusses the complexity and stress of the job search process. Focusing on the applicant seeking to join a single-specialty private practice, Dr. Moshirfar gives some pearls as to how to think through the negotiation and contracting process. Noting the frequency with which freshly minted spine care providers change practices and the opportunity costs of these moves, he suggests that due diligence is required at the outset.

Candidates are advised to begin their search early and to look at a number of opportunities. They should look seriously only at jobs in areas they wish to live. Understanding the local practice environment and the local need for additional specialists is as important as the employment salary. Dr. Moshirfar notes how easily one can either be swayed by the first year salary number or lost in a sea of details. He recommends four primary numbers when evaluating an opportunity. While the salary is important, the opportunity for future growth is much more important. The terms for partnership and any buy-in should be clearly established prior to joining. The value of non-cash

elements is often under-recognized. Retirement, CME and marketing expenses, for example, may add significantly to the value of an employment package.

Given the current financial situation, the question, it seems, is will we be able to afford to provide this advanced, technically sophisticated, and expensive care to the public? Recent years have seen an increasingly aggressive CMS delivering coverage statements denying patients access to new spine technologies. Interestingly, while some of these technologies remain justifiably controversial, FDA clearance required prospective, randomized, controlled trials and a higher level of evidence than any previous, automatically covered device.

Skeptics claim that the outcomes of surgical procedures for low back pain do not justify the costs or the risks. Even the strongest proponent of disc replacement might agree that clearly establishing the diagnosis and predicting a favorable outcome may be difficult. With all of the new technology available in the operating room and procedure suite, we have made few gains on the diagnostic front. To improve the specificity of preoperative evaluation of discogenic low back pain, Todd Alamin and coworkers designed the functional anesthetic discography system. In some areas, FAD is gaining interest as a tool to improve on provocative discography. Today, peer reviewed data remain limited.

In this issue's Invited Review, Dr. Richard Derby, from Stanford as is Dr. Alamin, and his colleagues, Drs. Ray Baker, Lee Wolfer and Michael DePalma, provide us a review of anesthetic discography and the catheter-based FAD. The root question: will we be able to better identify patients who will do well with fusion or disc replacement procedures? Problems

assessing the response to FAD include the absence of a definition of degenerative disc disease and the absence of a gold standard or pathognomic finding.

The Stanford group and Dr. Carragee in particular, have studied discogenic pain and provocative discography extensively. One recent study attempted to provide a standard for comparison by comparing surgical outcomes between mobile spondylolisthesis patients and a presumed discogenic pain cohort. Despite rigorous inclusion criteria, only 27% (8 of 30) of the discogenic patients met the “highly effective” success criteria. Only 43% (13 of 30) met the “minimal acceptable outcome” compared with 29 of 32 (91%) in the spondylolisthesis group. These findings suggest FAD will need to improve significantly upon provocative discography in identifying surgical patients.[Carragee EJ, Lincoln T, Parmar VS, Alamin T. A gold standard evaluation of the “discogenic pain” diagnosis as determined by provocative discography. *Spine*. 2006;31(18):2115-2123]

In Alamin’s comparison of FAD and PD to predict a favorable surgical outcome in 41 patients, 27% of the patients with a positive provocative discogram were negative on FAD. Some patients with two-level disease on the standard discography were found to have pain relief at only one level with FAD. It should be noted that these data remain in abstracted form from the 2006 ISSLS and 2007 NASS meetings. As of Dec 1, 2008, a peer-reviewed paper on FAD is not yet available. An OVID search returns no listings using “functional anesthetic discography” as a keyword. Interestingly, tests proposed for use in determining the suitability of major surgery for thousands of patients have been studied only in small samples of 30 to 50 patients.

Clearly, there are regional differences in the utilization of both provocative and anesthetic discography. The Dartmouth Atlas discloses marked variation in the rates of surgery for degenerative lumbar indications. How closely are these phenomena related? The Invited Review presents an interesting case of a patient

---

**Dr. Bunch provides an outstanding assessment of the ethics of direct-to-consumer marketing of medical devices. . . he examines the role of patient autonomy in medical decision-making and the means through which advertisers hope to affect this autonomy by influencing the patient’s behavior.**

---

with a prior anterior fusion at L5-S1, a subsequent multilevel dynamic stabilization procedure and recurrent pain. In that case, FAD was proposed as a means to determine whether a third surgery, anterior-posterior fusion of one or several additional levels was appropriate. Many surgeons might argue no test would identify a procedure that could reliably relieve pain in this setting.

While there has been a great deal of interest in FAD, the data remain limited. The authors recommend FAD with catheters be performed in select cases in which provocative discography has been indeterminate. With additional data, however, they feel FAD could become the criterion for evaluation of surgical candidates with discogenic low back pain. We hope to give *SpineLine* readers an update on this subject in the coming years.

President-elect Barack Obama will be inaugurated in January. In this issue’s Advocacy piece, Dr. Raj Rao, Chairman of the NASS Advocacy Committee and Nick Shilligo, NASS’s Senior Manager for Advocacy, provide a preview of the 111th Congress. They analyze the impact of the November election on the membership of both houses of Congress. In particular, they recognize the impact of the democratic majority on the passage of legislation in the Senate. In the House, significant changes may be seen to the various committees that oversee health matters. Ultimately, though, the ideas and goals of its leadership, including Speaker Nancy Pelosi, closely link with those of President-elect Obama.

Washington insiders claim that important legislation has the best chance

of passing in the first 100 days of a new president’s tenure. For Obama, major health care reform may come second after passage of an economic stimulus package. Chairman of the Senate Finance committee, Max Baucus, has been working on a health care reform package very similar to Obama’s. Potential changes include revamping the current, flawed sustainable growth rate formula. Baucus proposes incentives to primary care physicians for providing preventative care and coordination of care services. Since the system is budget-neutral, any increases for primary care physicians will result in decreases in specialty compensation. The authors report that NASS stands with the government in improving access, especially to quality specialty care.

One change with the incoming new administration has been the resignation of Christopher Christie, the New Jersey US Attorney. Given his post in a disgraced Justice Department and his appointment of former boss, Attorney General John Ashcroft as the “industry monitor,” a \$52 million position over an 18-month period, he was in an ironic position to assail the ethics of surgeons and their relationship with industry.

In this month’s Ethics column, Dr. Wilton Bunch from the Francis Marlin Mann Center for Ethics and Leadership at Stamford University addresses another aspect of physician-industry relations. Dr. Bunch provides an outstanding assessment of the ethics of direct-to-consumer marketing of medical devices. First, he examines the role of patient autonomy in medical decision-making and the means through which advertisers hope to affect

this autonomy by influencing the patient's behavior. Specifically, health care choices from a given drug to a specific implant become commoditized.

When manufacturers interact with doctors and hospital buying agents, they wish to push their product through the health care system toward the patient/consumer. In direct-to-consumer advertising, they seek to influence the patient to pull the product through the health care system to themselves. While certain pharmaceutical advertisements may benefit patients by informing them of the importance of screening for and treatment of certain chronic diseases, such as diabetes, there is no similar benefit in implant advertising.

The advertising itself may present facts about the product in question. More importantly, it creates an emotional framework through which the patient sees the product. This emotional state affects the patient's ability to clearly process the information. Positive attributes are stored and recalled, while complications and risks are minimized. A number of emotions can be employed, but hope is the most common. Patients see famous figures from sports with a given implant and can subconsciously hope for similar success. They associate that athletic success with the implant.

Dr. Bunch notes that the pharmaceutical industry's efforts can "create" a disease, such as male pattern baldness. Further, companies seek to differentiate their product from others on the market, often with false justifications. Is the female specific knee really better for women than the standard? Is it worth a significant premium? Are there provable benefits of these, often more expensive, implants?

Dr. Bunch states that patients have little financial risk in their medical care. They have little to lose in requesting one implant over another, even if it costs their insurer or the hospital 50% more. Today, this statement remains true for elective orthopedic procedures in the retired patient population. I worry about how far it can be taken in spine care, however. For example, a patient "convinced" to have a fusion procedure or disc replacement by

---

**The advertising . . . creates an emotional framework through which the patient sees the product . . . A number of emotions can be employed, but hope is the most common. Patients see famous figures from sports with a given implant and can subconsciously hope for similar success.**

---

a powerful ad may not get the relief they are looking for. In fact, chronic disability may persist with devastating financial consequences to the patient and his family. Of course, the same is true for certain medical/interventional treatment modalities. In our area, Oxycontin can cost the payor \$1,000 per month. The real cost to the patient may be far, far higher.

In some cases, the companies more egregiously do the patients a disservice by tying their loyalty to a given brand or procedure type. A recent survey of orthopedic surgeons reported a strong sense the practitioner would lose patients if their requested brand or procedure was not performed. When the request includes an approach the surgeon rarely employs, the patient may be subjected to additional risk. For example, many total joints are still done by general orthopedists who perform only a few procedures a month. This population should not be unduly pressured into performing a less invasive approach that might not lead to adequate implant placement in lower volume surgeons.

Dr. Bunch discusses options to address the misleading information from this advertising. He feels that complaints from individual physicians and medical societies will have little impact. He may be right. A combined effort, on the other hand, where all physicians combine to get the more deplorable ads removed might be effective.

This month's Coding column addresses another aspect of less invasive and percutaneous procedures. Dr. Joseph Cheng, the Vice-Chair of the NASS Coding Committee along with his Vanderbilt associates

Sandy Province and Petrina White, discuss appropriate coding scenarios for discectomy procedures. They note that with marketing and industry forces at work, there is quite a bit of overlap and semantic confusion in the terms less invasive and percutaneous. In a truly percutaneous procedure, the surgeon is unable to visualize the local anatomy. Fluoroscopy is universally required and its use may be coded. In a minimally invasive procedure, a smaller incision is made. Often the local, healthy tissues are split, not cut, in an effort to minimize surgical trauma and speed recovery. In these procedures, however, the surgeon is able to see the local structures directly. In MIS procedures, bone removal may be undertaken.

Many percutaneous procedures require a far lateral approach to avoid midline bony structures. When coding these procedures, the context (eg, percutaneous) is more important than the semantics (eg, far lateral). The far lateral code should not be employed unless an open approach is undertaken. The situation is similar for posterior cervical foraminotomy procedures as with lumbar MED discectomies. In the lumbar spine, CPT 63030 is used while CPT 63020 is used in the cervical region.

Unlike fluoroscopic guidance or intra-operative utilization of a microscope, use of an endoscope does not routinely justify an add-on code. In selected cases, the surgeon should code the additional work required and add a 22 modifier.

Another view of percutaneous procedures is presented in this issue's Literature Review. From the medical-interventional standpoint, Drs. Smuck and Levin provide

another viewpoint in the Manchikanti et al randomized, double blind controlled study on cervical medial branch blocks for chronic cervical facet joint pain. For another take, see Dr. Sharma's review in *SpineLine*, 2008;9(5):38-39.

Medial branch blocks have been used to identify patients who might benefit from radiofrequency neurotomy. The study authors cite literature evidence that from 39%-67% of chronic neck pain may be at least partly facet joint mediated. In a group of 120 patients, medial branch blocks of bupivacaine alone are offered to 60 and bupivacaine with betamethasone to the other 60. More than 80% reported significant pain relief at 3, 6, and 12 months, but few differences were seen between the groups.

Drs. Smuck and Levin note that, while the paper appears elegant in its simplicity and superficially convincing, deeper analysis leaves them less enthusiastic for a role for medial branch blocks for "therapeutic indications." Our reviewers discuss several difficulties not readily apparent in the abstract. First, the abstract combines an initial four-group study into two groups for analysis and reporting. Two groups included Sarapin. Sarapin is an alkaline suspension of powdered *Sarcocolla purpurea* (pitcher plant). It has been used for "muscular and neurogenic pain" since 1931, but its mechanism of action remains obscure. Sarapin did not affect the outcomes and these groups were simply folded into with or without betamethasone groups.

Drs. Smuck and Levin also address the study's inclusion criteria. A remarkable 89% of patients exhibited a positive

---

**Ultimately, close physical assessment of these patients combined with a detailed history of the provocative and palliating factors for their symptoms should improve diagnostic accuracy in what is often dumped into the "mechanical back pain" category.**

---

response to the comparative block, a rate far higher than literature controls might suggest. Unfortunately, in that few details of the selection technique are made available in the paper, a post-hoc assessment of why these results were achieved is impossible. The lack of a reasonable explanation for how a bupivacaine injection can yield months of pain relief should give us pause. Ultimately, a placebo controlled, randomized trial may be the most effective means of answering this question.

In the second paper, Dr. Paul Arnold reviews a prospective, randomized trial assessing the effectiveness of a postoperative lumbar corset after fusion surgery for degenerative lumbar conditions. This trial examines differences in outcomes in terms of radiologic findings such as fusion rates and in terms of postoperative pain. No statistically significant differences were seen. As Dr. Arnold notes, eliminating postoperative brace wear offers a means of both decreasing costs and improving patient satisfaction.

Our final feature this month addresses a very different return to activity issue. This issue offers the return of the Spine in Sports column. Dr. Sara Christensen Holz from the University of Wisconsin teams with Beth Wiggert and Dr. Matthew

Smuck from the University of Michigan to explore sacroiliac joint pain in athletes. A mechanical approach is described. First, the athlete's biomechanical deficiencies are noted. Then, a structured rehabilitation program is constructed to address these deficiencies.

Interestingly, the authors discuss the special needs of athletes with what is otherwise a common generator of low back pain complaints. For example, the runner with a long stride length will notice small deficits in end range of motion that might otherwise be asymptomatic in less active individuals. In my area, insertional pain on the PSIS is often called SI joint pain. Most patients with spine pathology will have pain in this area. Injections often go through the tendons and provide relief no matter the source. Ultimately, close physical assessment of these patients combined with a detailed history of the provocative and palliating factors for their symptoms should improve diagnostic accuracy in what is often dumped into the "mechanical back pain" category.

We hope you enjoy this issue of *SpineLine*. We encourage your comments and criticism. We are also happy to hear ideas for subjects you'd like to see covered in future issues.