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2013 Presidential Address

How do we improve?

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Thank you to each of you. For without your hard work, dedication, resourcefulness, and ingenuity, the burden of spine disease would be unbearable for our patients.

Each decade, the World Health Organization conducts a study to measure the global burden of disease. This summer, they reported on the impact of 291 diseases. Low back pain is the #1 cause of disability in the United States and worldwide. Neck pain is #4. Together, they cause 5 million years of disability in the United States alone—enough for every person to be disabled by a spine condition for almost 6 days each year [1,2].

Spine problems may not be as lethal as cancer or as devastating as blindness, but given the high prevalence and lengthy duration of symptoms, the resulting impact on quality of life is tremendous. This is the challenge we face each day. This is the reason why we put up with the day-to-day hassles of electronic medical records, declining reimbursement, increasing overhead, insurance rejections, and an insane liability system.

This is also a good time to pause, acknowledge, and celebrate the progress that we as care providers, medical societies, and industry have made during the past decade. We still face many challenges and need to build on lessons learned and develop ways to collaborate that foster and sustain patient health.

Fresh out of residency, in 1985, I attended my first North American Spine Society (NASS) meeting. It was the first NASS meeting in Bolton Landing, NY. Wide-eyed, I sat with 200 attendees and listened to the giants debate the role of discography and the suggestion that screws could be placed safely in the spine. Some things have changed and some have not. I am honored to stand before you 28 years later and share my thoughts and lessons learned.

First, I would like to thank my family for their support and encouragement and, most importantly, for reminding me of purpose. Thanks to my colleagues and office staff for flexibility, coverage, and allowing me to work on behalf of all of you and our patients. And, special thanks to the NASS staff, program chairs, and our executive director, Eric Muehlbauer, for organizing this meeting and making our ideas come alive all year long.

Today, I am going to talk about the third most important issue we face. In this room are gathered the best spine providers and researchers in the world. Let me ask you a question. Why are you here today? Why did you come to New Orleans and to attend the NASS meeting? For some, the answer may be the great music or the amazing food. For others, perhaps meeting colleagues. Three hundred fifty of you came to present articles or posters. Twenty percent of you traveled from 57 countries. What do you want to take home?

Our spine community is diverse. Each has their own agenda: patient care, market share, lives covered, ideas discovered, fame, and fortune. Despite the variety of motives and goals, I hope on some level, hopefully a significant

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level, each of us is striving to improve patient health. So how do we improve?

Attending an NASS meeting is a start. We have a superb program and an incredible exhibit hall. We have talented presenters and multiple learning formats. But didactic learning is not enough. Fifty hours of classroom learning alone each year will not lead to a World Series championship.

Let us talk for a few minutes about baseball. If needed, you can substitute soccer. There are many lessons we can learn from sports.

First, I do need to disclose that I am sports challenged. I avoid sports bars for fear that someone will ask, ''Who do you favor this year in the World Series?'' I worry that I may respond confidently that, ''I am a lifelong Patriots fan.'' I do however have two credentials to talk about baseball. For 10 years, I lived in Cooperstown, New York, home of the baseball Hall of Fame. Every day, while walking to work (yes, some doctors who are not residents walk to work), I would take a shortcut through the Hall. Later, I will share some stories told by some of the old-timers who frequent the Hall.

The second are two items I acquired. The first is this bat manufactured by the Cooperstown Bat Company. The wood is a nice, fine-grain ash, and the balance is excellent. But it is an average bat, not a custom-cut Louisville Slugger.

The second is this baseball. This is not just any baseball. In 1956, this ball flew over the fence at Ebbets Field during a Brooklyn Dodgers game. My uncle caught it, and after the game, it was signed by the entire team—Jackie Robinson, Pee Wee Reese, Roy Campanella, and Sandy Koufax—the greats of baseball.

The bat is average; the ball is exceptional. This year, there are 23 players batting above 300. There are 183 players batting zero. Most are average … in the middle with a few superstars and a few dogs. How good are you batting as a spine care provider? Are you a superstar? Everyone in the front row is nodding vigorously, and they are probably correct. However, I do not mean the Harriet B. Rockefeller professor of minimally invasive surgery or a 2-pound curriculum vitae. How do you rate in your ability to care for patients?

Imagine for a minute that we had a way to measure each of your skills, your performance and put it on a graph. As scientists, we know the result would be a classic bell curve.

Some are better, some worse, and most in the middle. Bell curves do have limitations. They are not as sophisticated as funnel plots for displaying this kind of information. They do not account for extremes in variations and they do not determine the appropriate level of care. Insurers at times assume that all care provided above or below an arbitrarily defined spot on the curve is either good or bad. The media at times inflame the public by declaring that ''half of all physicians are below average.''

Now, if I gave you this graph and asked you to mark your place on the curve, where would you be?

Most of us would place ourselves somewhere above the average. Relax, this is normal human behavior. If you ask Swedish drivers to rate themselves compared with other drivers, 94% would state they are above average, and 84% of French men would emphatically state they are in the top half of French lovers [3].

This tells us several things. First, we tend to overestimate our good talents and we tend to minimize our shortcomings. Second, we do not know how we are doing compared with our peers.

And finally, I believe this is evidence of our underlying desire to improve. So how do we improve?

Malcolm Gladwell in his book, *Outliers,* looks at learning and correlates excellence with luck and practice [4]. You all know the surgical maxim—It is better to be lucky than good. He studied super stars: people like Bill Gates, the Beatles, concert pianists, and professional hockey players. Part of their success was luck, for example, who your parents are and being in the right place at the right time.

Most people think excellence is largely the result of the genes you are given at birth. Gladwell argues that practice and training are more important than genetics. Before becoming masters of their trade, each of his examples had passionately practiced their skill for more than 10,000 hours. Not just holding retractors but directed practice: repeatedly performing the same skills over and over until they became effortless.

If you add up 4 years of medical school and 5 years of residency and fellowship, you get about 8,000 hours. Unfortunately, much of this time would not meet the rigorous practice described by Gladwell. A dancer or musician rehearses the same piece over and over again for hours each day until they get it perfect. I am not suggesting that we need to warm up on a surgical simulator before each case, but there is a growing mountain of evidence that experienced and high-volume providers get better results.

You may have heard of the Aravind Eye Care Hospitals in southern India. They perform more than 300,000 cataract surgeries each year. Each surgeon performs up to 40 operations per day, with a complication rate half that of the British National Health Service. They manufacture their own lens, implants, and charge about $2 for each. They perform half of their surgeries for free and make a profit [5].

Attending an NASS meeting and directed practice are still not enough. It is only a start.

It was 1930. The world was still in the grip of the great depression. Babe Ruth was being interviewed by a young reporter. As part of a move to publicly report player salaries