

M.D. NEWS

A BUSINESS AND LIFESTYLE MAGAZINE FOR PHYSICIANS

Annual Update in
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Special Report
Maryland's
Physician Shortage

The Virginia Spine Institute

Uncompromising Excellence;
Individualized Care

Reprint of
M.D. News
cover story

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THE VIRGINIA SPINE INSTITUTE PHILOSOPHY

How do you grow to be the largest spinal health care organization in the Washington DC metropolitan area while maintaining uncompromising excellence and personalized care? By consistently delivering individualized, comprehensive, unparalleled spinal health care. The Virginia Spine Institute (VSI) is exceptional for the following reasons: first, excellence in the nonoperative management of neck and back problems; second, excellence in operative intervention; and third, a unique multidisciplinary approach to the treatment of the spine. The whole of VSI is much greater than the sum of all the parts. The Virginia Spine Institute treats all spinal

problems from the simplest neck or backache to the most complex spinal deformity or failed prior surgery. Patients include professional athletes, moms, weekend warriors and executives. “Whether the patient is a professional athlete who needs to return to the game as quickly as possible, or a mom who needs to provide for her family, the VSI team will identify and provide the simplest and safest means for recovery,” says Thomas C. Schuler, M.D., F.A.C.S., founder and Chief Executive Officer of VSI.

“We do not look at the spine as an isolated anatomic structure,” says VSI spinal surgeon Michael Hasz, M.D., F.A.C.S. “We look at all aspects of the patient. We evaluate the patient’s health, any underlying medical problems,

The Virginia Spine Institute is the only spinal health care organization in the Washington, DC, metropolitan area whose team of surgeons are all fellowship trained and board certified in spinal surgery.



The Virginia Spine Institute

FACTOIDS

- 26,000-square-foot state-of-the-art facility
- 6 physicians
- All physicians are fellowship trained
- Board certification in specialty and subspecialty required
- 7 physician assistants
- 6 physical therapists, 4 doctors of physical therapy
- 3 Ph.D.s
- Over 70 employees
- Over 40,000 people treated since 1992

ACCOMPLISHMENTS

- Spinal consultants to the Washington Redskins since 1993
- Designated as the Mid-Atlantic Center of Excellence by The Spinal Research Foundation
- AAAHC Accreditation for The Virginia Spine Institute's pain management center
- First in the Washington, DC area to perform:
 - Cervical artificial disc replacement

- Lumbar artificial disc replacement
- Genetic engineering in surgery (implantation of bone morphogenetic protein)
- Pioneered minimally invasive surgery regionally and nationally
- Greater than 100 publications and presentations nationally
- Participation in numerous research trials

SERVICES

- Comprehensive spinal evaluation
- Medical pain management
 - Education
 - Coordination of rehabilitation
 - Medications
 - Smoking cessation program
 - Weight loss program
- Physical therapy
 - Aquatic rehabilitation
 - Manual therapy
 - Manipulation
 - Exercise/conditioning programs
 - Work conditioning/FCE

- Pilates/Yoga classes
- Diagnostics
 - X-ray
 - Bone densitometry
 - EMG/NCS
- Interventional pain management
 - Spinal and nonspinal injections
 - Acupuncture
 - Prolotherapy
 - Radio frequency procedures
 - Spinal cord stimulation
 - Intradiscal electrothermal therapy
 - Kyphoplasty/vertebroplasty
- Surgery (neck and back)
 - Minimally invasive spinal surgery
 - Laser surgery
 - Microdiscectomy
 - Laminectomy
 - Spinal fusion
 - Artificial disc replacement
 - Reconstructive spinal surgery
 - Salvage spinal surgery
 - Scoliosis correction

his or her lifestyle, job requirements and expectations.” The patient’s spinal assessment includes evaluating his or her gait pattern, hip, knee and shoulder motion, as well as the patient’s body and spinal function. Obesity, nicotine usage and nutritional status are all critical factors that impact spinal health and the outcome of treatment. It is important to understand a patient’s psyche, the patient’s knowledge of his or her condition and, in addition, his or her expectations from treatment. “The patient’s mental attitude, pathology and physical condition are the strongest predictors of our ability to restore normal function and resolve a patient’s condition. The bottom line is that we manage the entire patient and all related personal and health conditions to obtain a successful outcome,” says Brian R. Subach, M.D., F.A.C.S., Director of Research for The Virginia Spine Institute as well as Director of Residency and Fellowship Education.

NONOPERATIVE APPROACH

At The Virginia Spine Institute, surgery is not the first word or the last. Because of the institute’s success in utilizing nonoperative care first, only 10% of VSI’s patients ultimately have surgery; 90% are successfully treated nonoperatively. “When quality nonoperative treatment is used first, surgery is usually avoided,” Dr. Schuler says. This is a unique reality, as most spinal surgeons across the country do not truly practice

The Virginia Spine Institute pioneered the clinical application of bone morphogenetic protein in the spine. This monumental advancement represents the first application of genetic engineering in surgery.



The Virginia Spine Institute Culture

The Virginia Spine Institute understands that an organization is characterized by the attitudes and actions of its leaders. These attitudes and actions demonstrated daily define an organization's culture. The Virginia Spine Institute's unique culture consists of the following six key elements:

- **Caring.** VSI holds to the belief that caring is essential; we care for our patients, we care about the members of our staff and we care about ourselves. "It is because we care for our patients that we implement the safest, simplest and most appropriate treatment methods to help them get better and avoid surgery whenever possible — even though we are trained as spinal surgeons," Dr. Hasz says. VSI's culture of caring is demonstrated by quantity and quality of time spent with each patient. "We believe the quality of these one-on-one experiences has a direct impact on the success of our patients' treatment," Dr. Schuler says.
- **Excellence.** Continuing education for all employees at VSI, from the front desk personnel to the medical assistants and physicians, is a key part of our culture. Weekly academic symposia provide opportunities to discuss advances in medicine and to review patient care and decision-making. Every spinal surgeon at VSI is also required to achieve board certification in spinal surgery after first achieving board certification in neurosurgery or orthopaedic surgery. "This is important because there are very few board-certified spinal surgeons," Dr. Subach says. "We require that all physicians be fellowship trained and board certified in their chosen subspecialty, as well as their primary specialty. This focus on excellence enhances outcomes and patient safety."
- **Comprehensive Treatment.** The Virginia Spine Institute provides all aspects of patient care. "We are unique because of the diversity of our specialists and the vast skill sets that each physician possesses," says Dr. Kancherla. "We believe in optimizing our patients' recovery by providing the 'one-stop' convenience of a multidisciplinary approach. Our patients have the assurance of receiving the best treatment by the appropriate specialists in an environment that is designed to facilitate healing."
- **Innovation.** VSI is dedicated to improving patients' lives through advancements in medicine, new approaches to treatment and state-of-the-art technology. The Virginia Spine Institute has revolutionized the delivery of spinal health care in the Washington metropolitan area. VSI has pioneered the use of recombinant human bone morphogenetic protein (rhBMP) for use in surgery. VSI is a national leader in the development of minimally invasive spinal surgery to alleviate neck and back pain. Other regional "firsts" to VSI's credit include the first comprehensive multidisciplinary center dedicated 100% to spinal health; the first practice of fellowship-trained, board-certified spinal neurosurgeons and orthopaedic spinal surgeons in a single team; and first in cervical and lumbar artificial disc replacement.
- **Teamwork.** The delivery of first-rate health care at VSI is based on the vertical and horizontal integration of knowledge among the team of specialists and staff. To allow seamless communication among team members, VSI uses electronic medical records and digital imaging technology. This enables every provider to have instantaneous access to all patient records and imaging studies. Weekly academic conferences facilitate understanding of all subspecialists' thought processes. This team approach to communication positively impacts the quality of patient care and enhances each patient's ability to understand his or her treatment.
- **Leadership.** The Virginia Spine Institute has been at the forefront of the development of modern spinal health care. The VSI physicians have personally educated hundreds of spinal surgeons and thousands of allied health care providers across the United States over the last 15 years. Frequently, they lecture regarding the most advanced spinal surgical techniques, as well as spinal disease management and decision making. The Virginia Spine Institute offers residency and fellowship programs in spinal health care for physician assistants. Its doctors of physical therapy serve as adjunct faculty to Shenandoah University and George Washington University.

nonoperatively. Surgery does not end a patient's treatment at The Virginia Spine Institute; treatment is continued through functional and individualized rehabilitation until the patient is restored to his or her optimal lifestyle. "We are all experts in rehabilitation, as well as pain management," notes Thomas T. Nguyen, M.D., Director of the Pain Management Center of Virginia. "Our team of highly specialized spinal experts will identify the best nonoperative treatment program to resolve a patient's condition."

OPERATIVE APPROACH

The surgeons at The Virginia Spine Institute are unique and at the top of their field. To maintain this level of excellence, VSI requires that all of its surgeons are fellowship trained in spinal surgery as well as board certified in spinal surgery. These surgeons have, in addition, completed a residency and board certification in neurosurgery or orthopaedic surgery. Because of the vast subspecialty training by these physicians, they have the expertise to perform the broadest array of

spinal surgical procedures. In fact, the spinal surgeons of The Virginia Spine Institute routinely perform over 50 different surgical procedures on the spine. This is in sharp contrast to the average neurosurgeon or orthopaedic surgeon who just performs two to four different spinal operations. There is clearly a difference between a spinal surgeon who is a subspecialist, and a surgeon who just performs limited surgery on the spine. “Because of our surgeons’ extensive skills, the ideal operation is selected to ensure an optimal outcome. This helps accomplish the best short-term and long-term goals for each patient,” says Dr. Subach.

The Virginia Spine Institute surgeons remain at the forefront of spinal health care. This is demonstrated by the fact that the VSI physicians were the first in the Washington metropolitan area to implant a cervical artificial disc, to implant a lumbar artificial disc and to use genetic engineering in surgery (bone morphogenetic protein). They have pioneered minimally invasive surgery and the use of bio-resorbable implants both regionally and nationally. “Our physicians are constantly improving the way surgery and spinal health care are performed, while never forgetting the best, most successful approaches from the past,” states Dr. Schuler.

Top: Dr. Kancherla (left) and Dr. Nguyen (right) perform an injection procedure in the accredited ambulatory pain management center at The Virginia Spine Institute.

Middle: Individualized aquatic and land based therapy performed by expert manual therapists is a cornerstone of The Virginia Spine Institute’s successful spinal rehabilitation.

Bottom: Dr. Brian R. Subach utilizes digital radiography and electronic medical records to streamline the data collection in one of the many Virginia Spine Institute prospective studies.



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PHOTO COURTESY OF THE VIRGINIA SPINE INSTITUTE



The Virginia Spine Institute Team

The spinal surgeons and pain management physicians at The Virginia Spine Institute are at the top of their fields as innovative physicians who are all fellowship-trained, board-certified subspecialists, solely dedicated to the treatment of spinal disorders. These highly skilled subspecialty providers have backgrounds in spinal surgery, neurosurgery, orthopaedic surgery, pain management, physiatry, anesthesiology and family practice.

Thomas C. Schuler, M.D., F.A.C.S., the Chief Executive Officer, founded The Virginia Spine Institute in 1992 to revolutionize spinal health care in the Washington metropolitan area. Dr. Schuler has grown VSI from a one-man practice into an organization of five divisions, 70 employees and six physicians who are all spinal experts. "This growth has been made possible by the synergy created by a cohesive group of leaders with a common goal: individualized, comprehensive, unparalleled spinal health care," says Dr. Schuler. Through his visionary leadership as the President of The Spinal Research Foundation, Dr. Schuler is striving to improve spinal health care for all Americans. He has been the spinal consultant to the Washington Redskins since 1993 and frequently treats professional and amateur athletes. Dr. Schuler is an expert in the treatment of the cervical and

lumbar spine. He is an innovator in the field of spinal surgery and a pioneer in the development of nonoperative treatment strategies for spinal disorders.

Brian R. Subach, M.D., F.A.C.S., is the Director of Research for The Virginia Spine Institute as well as Director of Residency and Fellowship Education. After completing his neurosurgical residency at the University of Pittsburgh, Dr. Subach decided to dedicate his professional life to spinal health care; consequently, he completed a spinal surgery fellowship, which is a rarity in the neurosurgical community. Prior to joining The Virginia Spine Institute in 2002, Dr. Subach was a professor of neurosurgery at Emory University in Atlanta. "At Emory, Brian was noted for his tremendous expertise in the management of cervical spinal disorders as well as complex spinal salvage surgery," says Dr. Schuler. Dr. Subach says that he was drawn to The Virginia Spine Institute because of its national reputation as well as its philosophy, specifically that "nonoperative treatment is emphasized and that the surgeons don't unnecessarily rush to operate." Dr. Subach has further enhanced the national reputation of the institute through his numerous publications, and his extensive research and education both regionally and nationally.

The Virginia Spine Institute team (back, left to right): Michael W. Hasz, M.D., F.A.C.S., spinal surgeon; Christopher R. Good, M.D., spinal surgeon; Thomas T. Nguyen, M.D., Director of Pain Management and pain management physician; Dr. Vishal S. Kancherla, pain management physician; (front row, left to right) Dr. Brian R. Subach, M.D., F.A.C.S., spinal neurosurgeon and Director of Research; and Dr. Thomas C. Schuler, M.D., F.A.C.S., President and CEO and spinal surgeon.





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Clinical excellence is maintained by weekly medical education and case review conferences.

The Virginia Spine Institute Team — Continued

Michael W. Hasz, M.D., F.A.C.S., joined The Virginia Spine Institute in 1995 after completing his tour as a Major in the United States Air Force, where he was chairman of the Department of Orthopaedic Surgery and director of Spinal Surgery at the Andrews Air Force Base/Malcolm Grow Medical Center in Maryland. Dr. Hasz is a clinical instructor of orthopaedic surgery and assistant professor of surgery at the Uniformed Services Health Science University in Bethesda, MD. He is an expert in revision surgery of the thoracolumbar spine. He lectures nationally on the use of vertebroplasty, intradiscal electrothermal therapy (IDET) and nonoperative pain management techniques.

Dr. Hasz has enabled The Virginia Spine Institute to remain at the forefront of spinal health care. "The Virginia Spine Institute's physicians have the ability to help patients who have failed prior spinal surgeries. We evaluate them, diagnose their conditions and present a viable solution. I believe this is one of the greatest services that we provide to the individual and the community," says Dr. Hasz.

Thomas T. Nguyen, M.D., joined The Virginia Spine Institute in 2006 as its first board-certified pain management specialist. Dr. Nguyen has completed an anesthesiology residency, a family practice residency and a pain management fellowship. He is the Director of the Pain Management Center of Virginia. This is an accredited ambulatory surgery center for pain treatment at The Virginia Spine Institute. Dr. Nguyen is extremely talented in nonoperative procedures such as acupuncture, prolotherapy, radiofrequency ablation procedures and other pain management techniques. Dr. Nguyen also brings extensive knowledge in the area of medical management of painful spinal conditions. "We manage the patient's problem completely. We never perform a nonoperative or operative procedure and discharge the patient. We ensure that

the patient is properly rehabilitated, educated and has the ability to maintain recovery on his or her own," says Dr. Nguyen.

Vishal S. Kancherla, D.O., is the Director of the smoking cessation program and the weight loss program at The Virginia Spine Institute. With his unique background, Dr. Kancherla adds to the institute's ever-growing diversity of experts since joining in 2006. Dr. Kancherla has completed a residency in psychiatry and a fellowship in pain management. He is an expert in the use of electrodiagnostic nerve testing as well as interventional psychiatry and minimally invasive spinal procedures. In addition, as an osteopathic physician, he has significant experience in understanding joint motion and the impact of improper function on an individual's health. Dr. Kancherla says, "Our goal is to bring back function. We have patients who want to golf 18 holes instead of nine. We also have elderly patients who want enough pain relief to go grocery shopping. Everybody's goal is different, and it is our job to identify their goal and meet their expectations."

Christopher R. Good, M.D., joined The Virginia Spine Institute in 2008. Dr. Good is an expert in the modern management of spinal deformity. He completed his orthopaedic surgery residency at the Hospital for Special Surgery in New York. Dr. Good then completed a fellowship program at Washington University in St. Louis to fulfill his desire to pursue a career in the management of complex spinal disorders and spinal deformity. Dr. Lawrence Lenke, Chris's mentor at Washington University and a classmate of Dr. Schuler's at the University of Notre Dame, states, "Chris is an outstanding surgeon who provides great compassionate care to his patients." Dr. Good has a special interest in the management of idiopathic scoliosis, spondylolisthesis, as well as athletic injuries of the cervical and lumbar spine.

THE SURGEON BECOMES A PATIENT

After more than 20 years as a spinal surgeon, the long hours of operating had taken a toll on Dr. Schuler. He noticed progressive neck and arm pain after performing long surgeries. Dr. Schuler says, "It's an occupational hazard for spinal surgeons; we operate for lengthy periods with our necks in a flexed position."

The question was, "Where does a world-renowned spinal surgeon go for his own treatment?" Dr. Schuler's answer was, unequivocally, "I go to the best!" In this case, the surgeon's surgeons were colleagues Brian R. Subach, M.D., F.A.C.S., and Michael W. Hasz, M.D., F.A.C.S. "I have personally witnessed their exceptional ability," Dr. Schuler says. "Because of the cutting-edge, minimally invasive surgery performed in an outpatient setting by Brian and Mike, I was up and active within one day and back to unrestricted office work and performing surgery two weeks later."

The minimally invasive, fluoroscopically guided procedure was performed under general anesthesia through a one-inch incision in the back of the neck. Through this opening, a series of sequentially increasing diameter tubes were passed

The physicians at The Virginia Spine Institute have pioneered minimally invasive spine surgery.



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Dr. Thomas C. Schuler compares a human vertebra to a sperm whale vertebra he found while running on the beach in Nantucket.

until the final tube, the size of a roll of nickels, was placed. These dilation tubes were used to prevent the disruption of supporting muscles. Through the final tube, a high-speed burr microscopically resected the bony spurs that were impinging on Dr. Schuler's cervical nerves and spinal cord.

"Tom's spine was 4 inches below the skin," says Dr. Subach. "That's very deep; however, it's actually small compared to the professional football players we have treated with a similar approach. Minimally invasive techniques, such as that used on Dr. Schuler, are not appropriate in every case, yet do provide an excellent option to address very specific symptoms and pathology."

"I'm thankful to have had such proficient colleagues who were able to provide me with outstanding care," Dr. Schuler says. "I was impressed with how simple and uncomplicated my surgery and recovery were." ■

For more information about The Virginia Spine Institute, call (703) 709-1114 or visit www.SpineMD.com



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