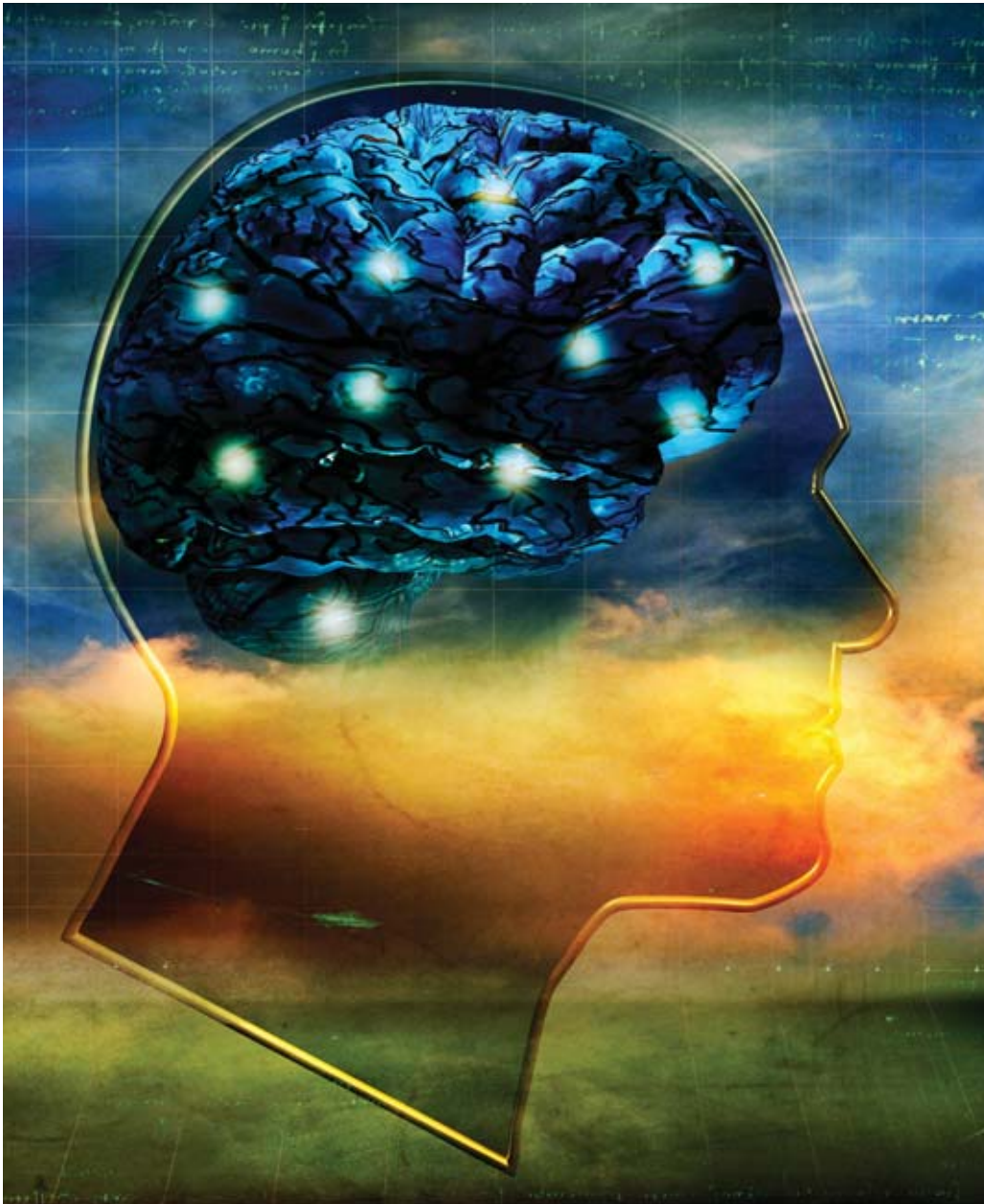


LOGAN SPEAKS

SPRING 2012 | Logan Speaks is produced by the offices of Institutional Advancement and Integrated Marketing and Communications



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COLLEGE OF CHIROPRACTIC
UNIVERSITY PROGRAMS

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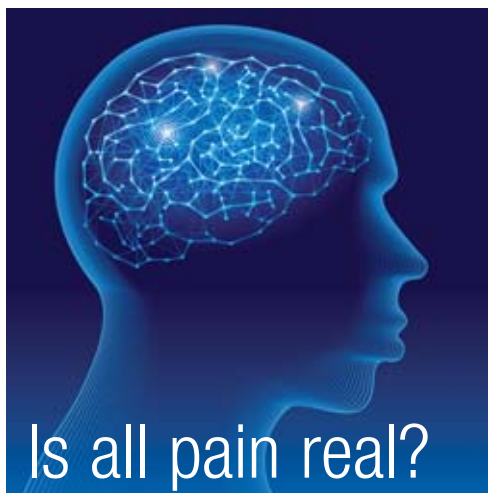
SCIENCE AND NATURE ALIGNED IN BALANCE



In Search of Pain Along the Brain Map

Pain is an opinion on the organism's state of health rather than a mere reflexive response to injury.

—Vilayanur Subramanian Ramachandran, MD, neuroplastician



Is all pain real?

While we can easily confirm pain's existence—just stub a toe, for instance—how do we explain an amputee who feels pain in a limb that no longer exists? If there's no extremity or tangible pain site does that mean some patients can experience pain that isn't real?

The International Association for the Study of Pain defines pain as an **“unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”**

Norman Doidge, MD, author of *The Brain that Changes Itself*, writes: “... as phantoms show, we don't need a body part or even pain receptors to feel pain.” Then perhaps the more critical question becomes how do doctors of chiropractic effectively diagnose and treat patients suffering from pain, specifically chronic pain, when the source isn't the product of trauma ... but rather a brain map.

Chronic Pain and Chiropractic

Logan's Radiology Department Chairperson Norman Kettner, DC, DACBR, DCBCN, FICC, has dedicated 15 years to imaging and studying chronic pain in patients. “Patients with chronic pain represent a heterogeneous population,” said Dr. Kettner. “From current research and literature involving the brain's cortical maps and pain, we know the brain is plastic, there is mind-body connectivity and that pain is best treated as a system with a whole-body systems approach, reflective of chiropractic's treatment methods.”

Dr. Kettner says the prevalence of chronic pain has been reported as high as 50-million-plus patients and the figure will only grow with our country's aging population. And as any chiropractic physician who has treated a chronic pain patient can attest, their cases are as complex as they are prevalent today.

“Say you treat a patient population that all suffers from the same acute injury,” offered Dr. Kettner. “Typically, 90 percent will heal. But, what happened to the remaining 10 percent who still report pain and are now at a heightened risk for transformation of acute to chronic pain?”

To answer such questions, Dr. Kettner turns to the study of neuroplasticity and neuro-rehabilitation, which he says can unlock our understanding of chronic pain and its source. As co-author of the chapter “Neuroplasticity in carpal tunnel syndrome (CTS),” published in the *Journal of Pain Management*, Dr. Kettner and his co-authors imaged therapeutic modulations and their effects on the brain maps. [*J Pain Manage* 2011;4(3):315-331].

The chapter reports compression of the peripheral median nerve within the carpal tunnel at the wrist leads to a range of structural and functional changes, which ultimately can result in deleterious neuroplastic change in the central nervous system. Their research rendered neuroimaging findings that corroborated the hypothesis that “CTS includes a central neuroplastic manifestation of a peripheral lesion ... CTS may also influence subsequent processing in other brain regions (e.g., cognitive, autonomic, affective).”

Dr. Kettner says when it comes to neuroplasticity, we're working with a

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Logan University is a diverse and engaging community committed to excellence in health sciences, education and service, guided by integrity, commitment and passion.

MISSION

LOGAN COLLEGE OF CHIROPRACTIC

Logan College of Chiropractic prepares students to become doctors of chiropractic who are superbly educated and clinically competent, practicing portal-of-entry chiropractic physicians. This mission is accomplished through our dedicated faculty, recognized for student-centered excellence; comprehensive science-driven, knowledge-based and information-facilitated curriculum; enhanced by community and public service. The institution is committed to the conduct of research and other scholarly activities.

complex, adaptive high-order control system, with a potential for modulation of the pain experience (improving or exacerbating) from the brain down and, in the case of CTS, to modulate peripheral nerve function. He also said changes to pain processes and brain maps as a result of therapeutic interventions, like acupuncture and probably adjusting, aren't unique to CTS cases but can apply to low-back pain and other chronic pain disorders.

"Chiropractors must remember the joints we treat and manipulate are merely the doorway to the central nervous system," said Dr. Kettner. "When you go through that door, what lies on the other side is the mind where plasticity and neuronal modulation occur."

According to Dr. Kettner, adjustments and acupuncture are examples of inputs into the nervous system. Rehabilitation and its repetitive musculoskeletal actions, for instance, drive the beneficial neuroplasticity. Equally important, he says, are the patient's psychosocial interactions, which can prove beneficial or damaging.

If we re-examine the hypothetical 10 percent of patients who still experience pain after they've completed their treatment programs, Dr. Kettner advises clinicians to consider their psychosocial inputs. "Plasticity is synonymous with learning," he explains. "Chronic pain and procedural learning are closely related, and memory and the patient's emotional status also play a major role." Dr. Kettner says researchers can trace some patients' suffering to their tendency to "catastrophize" pain. Meaning, the patient experiences an event and expects the continuation of the negative event in terms of pain, fear and anxiety.

The brain's response: It modifies its circuitry and pain processes toward maladaptive neural function.

The result: Patient's expected pain then manifests into experienced pain.

For chiropractic clinicians faced with cases where the patient's pain is connected to psychosocial episodes as opposed to only trauma, Dr. Kettner advocates for therapeutic interventions that treat the whole body and positive patient interactions.

"Chiropractors must remember the joints we treat and manipulate are merely the doorway to the central nervous system. When you go through that door, what lies on the other side is the mind where plasticity and neuronal modulation occur."

— Norman Kettner, DC,
DACBR, DCBCN, FICC
Logan's Radiology Department
Chairperson

"Chiropractic benefits aren't limited to our treatments or exercise and diet recommendations alone, how we engage and communicate with our patients is equally important," said Dr. Kettner. "Clinicians who reinforce how well their patients are progressing and communicate their patients' improvements are positively altering the central nervous system."

Dr. Kettner's Next Chapter



Dr. Norman Kettner

Dr. Kettner and his team are currently focusing on a new field of pain research where they are observing areas of cortical thinning related to pain processing. They will present some of their findings at the ACC-RAC conference this March.

"Our preliminary results indicate patients with CTS undergo cortical thinning in areas of pain processing in the brain," offered Dr. Kettner. "We are not sure why these patients are losing cortex ... possibly, overuse of processing due to pain, but it's too early in our research to confirm."

What we do know is the more researchers, like Dr. Kettner and his team, study the field of neuroplasticity and image the brain's response to pain and therapeutic interventions, the more likely they will uncover new hope for patients. According to the chapter "Neuroplasticity in carpal tunnel syndrome," applications include patients suffering from chronic pain, neurodegenerative disease and possibly cognitive disorders that arise from altered perceptual function, such as anorexia and obesity.

"It is likely that the evolution of this field will continue to be fueled by basic science advances in the understanding neuroplasticity mechanisms along with developments of new structural and functional imaging techniques," the chapter concludes. "It is clear that application of neuroplasticity-based therapies to treat neurological disease has been relatively limited and will be greatly surpassed in the near future."

Converting “Sick Care” to Health Care: The Role of Nutrition



Dr. Pamela Wakefield

By: Pamela Wakefield, DC, DABCA

Logan’s instructor for Clinical Nutrition in Human Systems

The effects of poor diet, lack of exercise and stress are turning up on patient charts in the forms of diabetes, heart disease and dementia, to name just a few conditions. According to the Centers for Disease Control and Prevention, chronic diseases account for 70 percent of all deaths in the U.S., which totals 1.7 million deaths each year. These diseases also limit the daily quality of life for nearly 1 out of 10 Americans, or roughly 25 million people.



Yet buried beneath the bleak statistics, lies hope. If flawed lifestyle choices are linked to chronic illness, then

preventative and wellness interventions can save lives and billions of dollars in associated health care spending.

To advance doctors of chiropractic’s role as the primary source of preventative care, Logan’s Master of Science in Nutrition and Human Performance is dedicated to the modern patient who is sick and tired of being sick and tired.

Practical Education to Address Patients’ Needs



My 20-plus years of treating patients, including my current work as an on-site chiropractic physician for the St. Louis Veterans

Affairs Medical Center, provide the framework for my clinical instruction.

Early in my career, patients sought chiropractic care to uncover and remedy their pain source. Often, nutrition played a role in their care.

Today, patients demand more than freedom from aches and pains. Health care consumers are seeking out providers who can prevent illness and the high costs associated with chronic disease. Logan’s

master’s degree program in nutrition creates a distinction among health care practitioners, highlighting those who’ve been schooled to both prevent and treat illness.



Still I understand, as a practicing DC and an educator, it takes more than a degree to meet the needs of a modern patient. It requires an education that is rooted in clinical relevance. This is why Logan’s course, Clinical Nutrition in Human Systems, which I teach to both DC and master’s in nutrition students, draws from my own diverse clinical experiences to effectively blend science with practical application. We approach the subject of nutrition from a clinical-case perspective so our students, who’ve studied biochemistry and other core science curricula, can now apply science to real-world patient scenarios.

A Window into Dr. Wakefield’s Classroom



My course requires students to evaluate authentic patient cases. They assess the patient’s nutritional status, level of wellness, and extent and impact of any disease processes. Students review the patient histories, exams, X-rays and laboratory findings and then formulate nutritional

recommendations for diet and supplementation. Just like in practice, they must account for drug interactions, compliance, psychosocial factors impacting health and wellness, and socioeconomic factors that may create barriers to healthy food consumption.

In addition to case studies, we review the evidence for specific nutritional recommendations for treating disease conditions. Students are taught to evaluate the available evidence, understanding there are some nutritional recommendations that haven’t been studied, to advance their knowledge and enhance their counsel.



Ultimately, Logan’s nutrition-based coursework is designed to train students to consult with their patients, analyze their current diet and health status, and make reasonable nutrition and supplementation recommendations. Our goal for Logan students is that they emerge from the classroom as skilled clinicians and wellness practitioners, equipped to prevent and treat chronic pain and illness.

Dr. Wakefield’s classroom instruction honors all HIPAA requirements. To learn more about Logan’s Master of Science in Nutrition and Human Performance, including its plans for online curriculum, please call 1-800-533-9210.

Did You Know?

In an effort to keep you informed about recent news and industry changes that may affect the profession and your practice, we've collected the following news briefs from various trade publications and news articles. We hope you find this synopsis beneficial.

Excerpts

ABC News

Chiropractic Best for Neck Pain

A new study published in the *Annals of Internal Medicine* found patients who relied on chiropractic or exercise to address neck pain were more than twice as likely to enjoy pain relief than those who used medicine. Funded by the National Institutes of Health, the study tracked 272 patients with recent-onset neck pain. These patients were treated during a 12-week period by three different methods:

- Medication
- Exercise
- Chiropractic care

Patients who received chiropractic care experienced the highest success rate, 32 percent, followed by exercise, 30 percent. The study listed medication as the least successful neck-pain remedy with only 13 percent of patients reporting pain relief. Dr. Lee Green, professor of family medicine at the University of Michigan, told ABC News the finding “doesn’t surprise me a bit.” Dr. Green added, “Neck pain is a mechanical problem, and it makes sense that mechanical treatment works better than a chemical one.”

ACA Today

IHS Student Loan Repayment Program

The American Chiropractic Association recently announced doctors of chiropractic are now eligible to apply for a student loan repayment program administered by the Indian Health Service (IHS), an agency of the U.S. Department of Health and Human Services.

The loan repayment program awards up to \$20,000 per year for the repayment of qualified student loans in exchange for an initial two-year service obligation to practice full time at an Indian health program site. IHS provides health care to approximately 2 million American Indians and Alaska Natives through a system of programs and facilities located on or near American Indian reservations and through contractors in certain urban areas.

Chiropractic Economics

Experts from health care law, privacy, security, regulatory and data breach industries compiled a list of health care data trends for 2012. Overall, the experts reported that health care practitioners should view safeguarding patients’ protected health information (PHI) as a patient safety issue.

Additional predictions for 2012 include:

- **Health care organizations will not be immune to data breach risks caused by the spread of mobile devices in the workforce**, according to Dr. Larry Ponemon, chairman and founder, Ponemon Institute. In the recent benchmark study, 81 percent of health care providers say they use mobile devices to collect, store, and/or transmit some form of PHI. However, 49 percent of these health care providers admit they haven’t taken steps to secure their mobile devices.
- **Social media risks in health care will grow**, according to Chris Apgar, CEO and president, Apgar & Associates, LLC. As more physicians and health care organizations rely on social media channels to communicate with their patients and promote services, misuse of social media platforms will heighten

the risk of PHI exposure. Health care organizations should employ a social media plan and ensure employees aren’t potentially exposing PHI. Risks include patient vulnerabilities, data breaches, civil penalties and loss of business.

- **Cloud computing provides rewards and risks.** James C. Pyles, principal, Powers Pyles Sutter & Verville PC, says technology is outpacing security and creating unprecedented liability risks. While cloud computing provides an attractive option for health care providers, especially as Health Information Exchanges (HIE) increase, privacy and legal issues, such as compliance with HIPAA, abound. Before disclosing protected health information via the cloud, employ a written vendor agreement and ensure the vendor has adequate cyber-security insurance.
- **Increased emphasis on willful neglect leads to increased enforcement of HIPAA**, according to Adam Greene, partner, Davis, Wright, Tremaine LLP. Expect the Department of Health and Human Services Office for Civil Rights to more aggressively enforce against noncompliance due to “willful neglect” and to focus on the 150 HITECH Act audits and publication of the final rules implementing modifications to the HIPAA regulations.
- **Privacy and security training will be an annual requirement**, says Peter Cizik, co-founder and CEO, BridgeFront. Health care organizations must ensure staff follows the procedures they’ve established, as the majority of breaches are caused by human error, not technology failures. The most effective methods for preventing data breaches include targeted employee training and awareness programs.



Visualizing Better Health: Logan Faculty Measures Body Composition with Newly Acquired Device

All patients must measure their weight on a scale. However, this mass-measuring gauge can't offer health insights, like body fat-to-muscle comparisons or bone density.

Given the burden excessive weight carries, from causing disease to wearing down joints, Logan's radiology and nutrition departments are employing technology to examine fat and its potential for attacking the musculoskeletal system.

The General Electric Lunar Prodigy Advance uses dual-energy X-ray absorptiometry (DXA) to examine body composition, measure bone mineral density and determine body fat distribution in patients.

Dr. Robert Davidson, assistant professor in Logan's Master of Science in Nutrition and Human Performance program, who helped procure the DXA machine, said the device allows for a more thorough evaluation of a patient's overall health, monitoring the effects of change in muscle and fat and providing data for treatment and assessment.

“Based on the projected images, we can determine how likely someone will develop osteoporosis or the percentage of fat versus lean muscle,” Dr. Davidson said. “It not only will enhance the clinical training experience, but further advance evidence-based research to aid in patient health care. It's a valuable addition to Logan and we are very fortunate to have it.”



Dr. Robert Davidson

Creating Effective Plans for Patients

Housed in Logan's radiology department, the DXA machine will serve as a learning tool for Logan students' clinical studies, and it will be applied to a number of chiropractic research projects.

For example, one Logan graduate student will develop methods using the DXA machine to determine the strength of an individual's tibia so that one can predict the risk of a fracture during physical activity.

Another research study, which Dr. Davidson will facilitate, will examine the body composition of a patient trying to lose weight over a certain period of time. The DXA machine will aid in determining if that person is losing actual body fat or muscle mass, and it will help pinpoint precise regions of the body where the change has occurred.

“Results from the body composition could potentially change the way people diet, lose weight and live,” he said. “Imagine getting a scan of your body, showing where the fat and muscle tissue are and having that visual over a six-month timeframe, opposed to just having a number from a scale. That’s a huge motivational factor.”

Logan’s Radiology Department Chairperson Norman Kettner, DC, DACBR, DCBCN, FICC, says the composition of the human body has completely changed as a result of our environment, our diet and our lifestyle.

According to the National Institutes of Health, more than two-thirds of adults aged 20 or older are considered obese. For children, the news is worse: Over the past three decades, obesity rates in children have nearly tripled. One in three children and teens today are considered overweight or obese.

“Humans today live sedentary lives, but the human body was designed for movement,” Dr. Kettner said. “We know that fat attacks the cardiovascular system and that obesity causes chronic disease, like type 2 diabetes, and cancer, but studying the effects fat has on the musculoskeletal system, especially with respect to pain, presents a new area of study that we can now explore with the DXA.”

Dr. Davidson said with the visual, practitioners and their patients are getting much more information along with more options for treating the problem. “With better data, we can create more effective and individualized treatment plans that tackle the right issues for our patients.”



Precise Results, Advanced Outcomes

Dr. Davidson said while the body composition machine has been around for a while, the technology has become increasingly more refined.

Pioneered by General Electric in 1980, the first DXA machine used what is called a pencil beam technology, which scans the body back and forth. Today, the device uses the fan technology, allowing faster more accurate readings.

Dr. Davidson said he recommended the Lunar Prodigy Advance for Logan based

on his past experiences with the technology, its quality and effective findings. “The device has gotten to the point where it’s definitely in a solid state of technology,” he said. “We haven’t seen any new technology in the last 10 years that has superseded this, so we know it’s reached a stable, mature platform.”

Additionally, the X-ray exposure on this machine is much lower than with traditional film. Dr. Davidson said the amount of radiation exposure for a whole body scan is similar to the amount of solar radiation you would get on a flight from New York to San Francisco. It’s much safer to use, he said, and it’s completely digital.

The Lunar Prodigy Advance machine earned a stamp of approval from the World Health Organization (WHO), which defines osteoporosis based on the results of the technology. The WHO created a database that the DXA machine uses so that when you get a bone scan, for example, you’ll not only learn your bone density value, which is determined by the grams of minerals per square centimeter, but it can compare your results with people your age on either side of the spectrum.

In addition to helping patients, the technology will serve as a standard for developing measures and methods as well as validating other chiropractic tools used for body composition.



“Being able to talk to people, especially with the baby boomer population, about bone density and ways to treat bone osteoporosis conditions, really opens up a doctor of chiropractic’s potential pool of patients,” Dr. Davidson said. “Again, the information we’re able to bring to the patient, as a result of this tool, helps to keep chiropractic at the forefront of effective health management.”

Building Your Practice

The Importance of Networking Within Your Community

In this issue of Logan Speaks, we reached out to Logan graduates who recently opened their own practices to glean marketing tips for the chiropractic start-up.

Dr. Dino Pappas and Dr. Marie Tholl, both December 2009 Logan graduates, share successes from their marketing plan for The Center for Integrated Medicine, which this husband-and-wife pair opened in Tinley Park, Ill., last August. They also serve on Logan's President's Young Advisors' Council.

Is there a certain marketing tactic(s) that has proven successful in your practice?

We've employed a range of tactics, and we attribute our success to a consistent and proactive approach. For instance, we focused on several low-cost, high-yield methods, including active participation in community and networking events; consistent branding and message delivery to our target market through communication channels, including social media; patient education and engagement; and referral cultivation with patients.



How do you stay engaged with your patients and the community?

We listen to the community's wants and needs. It's important to remember that you are there to serve them, so listening is a critical part of the communications process. For example, we've attended public



Dr. Marie Tholl

events, like those sponsored by our local chamber, community-based groups, professional organizations, youth sports and community expos. These gatherings provide opportunities to build relationships with local influencers, like the mayor and public officers. We also use a number of public communication vehicles, including social media, our website, newsletters and the local paper to stay in touch with patients and prospects.

What kinds of things are you doing to ensure that your patients become referral sources for your practice?

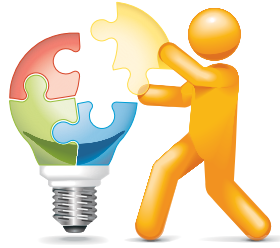


We always make the patients feel like they are partners in our practice, more so than patients. For example, we've hosted several patient-appreciation events, like a ladies' night, patient barbeque and holiday gatherings, and send thank you notes to those who refer patients to us.

What advice would you offer to recent graduates looking to open a practice in a challenging economy?

- Make sure you have everything ready to go before you graduate. Prepare a sound business plan with the help of a core group of professionals (attorney, accountant, mentors, real estate agent), and promote your business concept with relevant influencers to earn early market adoption.

- Be relentless. This is a challenging economy and banks are no longer lending money like they were four or five years ago. Keep working toward your goals. You are responsible for your own successes and failures, no one else.



- Consider alternative sources. Beyond banks, consider investors, franchises and doctors who are approaching retirement and would like to train an associate who could purchase their practices. Doctors selling established practices, SBA loans, lines of credit (secured against a house, car, property, investments, etc.).
- Be creative. Sometimes, it takes creativity to finalize a deal. Don't be afraid to ask, worst-case-scenario is all they'll say is no.



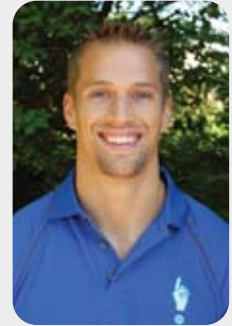
- Analyze your competition. Know what they do, know what they don't do, know how you differ, and let the public know how you differ.
- The Internet is dynamic and constantly growing. Make sure people can find you online and take advantage of social media. It only costs time, not money.
- Know your identity and develop your brand. Don't be afraid to be different, and excel at what you do.



Dr. Dino Pappas

Dr. Bartemus Putting Patients First

The most successful tactic for marketing my practice has been getting out in the community, and I do so as much as possible. I know that sounds rather simple, but I track where every patient comes from and 90-plus percent arrived at my practice after meeting them at a community or networking event.



Dr. John Bartemus

Tips from Dr. Bartemus:

- **Involvement:** It's also important to support my patients and their passions. I go to their motocross races, their 5K runs, their cookouts and their businesses.
- **Communication:** I use YouTube, Facebook, Twitter, blogs and e-newsletters to stay connected with my patient base and spend time talking with patients in my office and out in the community.
- **Education:** Testimonials are huge, especially video testimonials. Pick one and tell it to every patient you see that day.

Marketing your practice is not easy, but don't let that stop you. Decide what you want to do and follow through. Don't be the doctor you think people want you to be, be the doctor you want to be."

Dr. John Bartemus, December 2009 Logan graduate, owns and operates the Transcendent Lifestyle Center in Cornelius, N.C. He is a Certified Chiropractic Wellness Practitioner and member of the International Chiropractic Association. He also serves on Logan's President's Young Advisors' Council.

Doctor Doctor



Logan College and the Logan Alumni Association have partnered to sponsor Doctor to Doctor, a practice tips section featuring effective practice management methods from successful DCs. Doctor to Doctor is spearheaded by Dr. Ralph Barrale, vice president of chiropractic affairs and dean of postgraduate education. If you would like to submit a practice tip to Doctor to Doctor, please contact Dr. Barrale at 800-782-3344, or e-mail your tip to tower@logan.edu.

This installment of Doctor-to-Doctor features practice tips from Dr. Michael Thompson. Dr. Thompson is an August 1994 graduate of Logan College and spent 15 years practicing in Kentucky before opening Vibrant Living Chiropractic in St. Louis.

Dr. Thompson shared this article with Logan College of Chiropractic/University Programs for publication in Logan Speaks. Logan claims no copyright interest in Dr. Thompson's work.

Becoming Elite in Practice



Dr. Michael Thompson

While watching the recent World Series, a thought occurred to me: Each one of us running a practice is no different than any ballplayer who competed in the World Series in what it requires to be successful each and every day.

This thought not only resonates with what I do in my office weekly with patients, but what we as chiropractors rely on daily. We all make our living, just like professional athletes, with our physical and mental abilities. The degree of success we attain is directly related to how well we take care of our own health and the health of our practice.

There are basic principles we must follow to optimize our health: physically train our bodies, rest and recover, eat and hydrate appropriately, think well and get adjusted regularly. The end result is optimal health, which leads to maximum performance. This is the goal not only for ourselves, but our patients as well.

The same holds true for your practice. When was the last time you gave your practice an "adjustment"? When considering elevating your practice to an elite status it all begins with your purpose. Why do you do what you do? As frustrating as it may be to answer this question, it is the only place to start. Handling the hard questions first makes the action steps to reach elite status that much easier. Second, what are you trying to develop? Is it acute care, hybrid or a wellness practice? You have to identify what you want to create after you know the why.

With your purpose in mind, your ideal practice vision begins to gain clarity, as do the steps necessary to reach your goal. The key to improving the health of your practice is to be congruent and consistent, just like improving your physical health. Make sure that all marketing materials (external and internal) convey a congruent message. For example, do you contradict yourself by claiming to practice wellness and have signs/ads regarding acute pain relief? Make sure that your newsletter includes topics relevant to your patients and include a success story of the month. There are hundreds of action steps to choose from, so make a top-five list and get started.



The second lesson from the World Series Champion St. Louis Cardinals that every one of us should never forget is that persistence, resiliency, gritty self-determination and an unwillingness to quit is what it requires to reach an elite level.

You may be wondering, as I did, how that relates to your practice or life. The same formula the Cardinals used to raise the championship trophy is identical to what is required to take your practice to the next level. Begin with the end in mind (your ideal practice), never lose sight of your target (stay focused), appreciate where your practice is and take massive action every day to elevate your practice to a new level.

As Henry Ford once said, "Whether you believe you can or can't, you're right." Your practice is a direct reflection of your beliefs. Your beliefs dictate your actions. The end result is either just dreaming about your practice or having the practice of your dreams.

Research Spotlight

Featuring News from the Department of Radiology



Can Ultrasound Offer a Window into the Vertebral Canal?

Logan's recent investment in 4D sonography technology could lead to ultrasound imaging of uninvestigated regions—namely the adult spinal column. Housed in Logan's Radiology Department, Dr. Norman Kettner plans to use the device and its 4D probe to learn if ultrasound can produce images from inside the vertebral canal.

With traditional ultrasound technology, vertebral bone blocks this view. While magnetic resonance imaging (MRI) and computerized axial tomography (CAT scan) can capture these desired regions, it comes at a high cost.

If Dr. Kettner and his team can use ultrasound to explore the vertebral canal and identify anatomy and disorders, such as nerve root compression, Logan could initiate a new field of ultrasound research. Moreover, Logan could present the health care system with a more cost-effective diagnostic tool, and one that employs high-frequency sound waves as opposed to radiation.

Although this area of research presents great potential and many unknowns, Dr. Kettner and his team are certain their new sonography technology will help them better identify muscle injuries and disorders surrounding the vertebral column.

Ultrasound Journals Publish Logan's Research

Four distinct ultrasound journals have published research papers produced by Logan's Radiology Department over the last three years. The department believes these works mark the first time the ultrasound discipline has published research from a chiropractic institution.

Most recently, the *Journal of Clinical Ultrasound* reported Logan's ultrasound findings of increased cross sectional area and circumference of the greater occipital nerve in patients with a type of headache known as occipital neuralgia.

A Publication of Logan College of Chiropractic/University Programs for Alumni, Students, Employees and Friends of the College

LOGAN SPEAKS

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February – May 2012

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Hope Davis, MS, ATC; and
Cecile Smith, Pilates Instructor*
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June 2-3

June 30-July 1

Basic Acupuncture Certification Program

*Instructor: Zev Myerowitz, DC,
Dipl.Ac. (NCCAOM), Lac.*

March 10-11

Neurology Certificate #3

*Instructor: William Huber, DC,
DACAN, DCBCN, MS*
Please note location:
Cincinnati, Ohio

Insurance Consultant/ Peer Review #3

*Instructor: Mario Fucinari, DC,
CCSP®, MCS-P*

Internal Health Specialist #2

*Instructor: Howard F. Loomis, Jr.,
DC, FIACA*

March 24

Chiropractic Assistant #7 Physical Therapy Modalities

*Instructor: Ronald Grant, DC,
FICC, DAAPM*

March 24-25

Certified Chiropractic Sports Physician® #5 On Field Assessment of Injuries/Risk Management

*Instructors: Kevin McClain, DC,
CCSP® and Charles Copeland, DC*

April 14-15

Insurance Consultant/ Peer Review #4

*Instructor: Mario Fucinari,
DC, CCSP®, MCS*

Internal Health Specialist #3

*Instructor: Howard F. Loomis, Jr.,
DC, FIACA*

April 21

Chiropractic Assistant #8 Exams, Vitals, Documentation

*Instructor: Courtney Zindrick-
Lehmen*

April 21-22

Certified Chiropractic Sports Physician® #6 The Shoulder

*Instructor: Howard Chapel, DC,
DABCO*

April 28-29

NCMIC – Physician/Patient Communication & Ethics/Risk Management

*Instructors: Anna Allen, MSN, RN
and Steve Savoie, DC, DABCO*

Basic Acupuncture #3 (see above schedule)

Long Tract Nerve Entrapment with Gross Anatomy

(contact ART® for registration)
*Instructors: D. Robert Kuhn, DC,
DACBR, ART® and Mark Stoebe,
DC, DABCO*

May 5-6

Logan Basic Technique #2

Instructor: Patrick Montgomery, DC

Insurance Consultant/ Peer Review #5

*Instructor: Mario Fucinari, DC,
CCSP®, MCS*

May 12-13

Basic Acupuncture #4 (see above schedule)

May 19

Chiropractic Assistant #9 Adjunctive Procedures

Instructor: Daryl Ridgeway, DC

May 19-20

Certified Chiropractic Sports Physician® #7 Sports Injuries to the Spine

*Instructor: Mario Fucinari, DC,
CCSP®, MCS*