November 2014

ACAnews

The Official Publication of the American Chiropractic Association

ACA www.acatoday.org

Opportunities in Health Care Reform

CHRONIC PAIN FOCUS FOR DCS

Are You Driving Up Chiropractic's CERT Rating?

Manipulation Activates Muscles of the Core

Cervical Disk Herniation

Opportunities in Health Care Reform

CHRONIC PAIN FOCUS FOR DCS

Low-back pain is one of the most common chronic, non-malignant pain conditions treated by primary care physicians.[1] Chiropractors and primary care physicians treat more than 90 percent of patients suffering with chronic pain.[2] Opioids are common medications used to treat patients with chronic, non-malignant pain, described as *Pain unrelated to cancer that persists beyond the usual course of the disease or injury*.[3] The Centers for Disease Control and Prevention claim that opioids continued to increase drug overdose deaths for the 11th consecutive year in 2010.

> *In 2010, nearly 60 percent of the drug overdose deaths (22,134) involved pharmaceutical drugs. Opioid analgesics, such as oxycodone, hydrocodone, and methadone, were involved in about 3 of every 4 pharmaceutical overdose deaths (16,651), confirming the predominant role opioid analgesics play in drug overdose deaths.*[4]

Daren Anderson, MD, discusses an innovative program that improves the quality of care for patients with chronic pain in community health centers by including chiropractic. Michael Taylor, DC, describes how expanded scope of practice for chiropractic physicians affects chronic pain treatment. James J. Lehman, DC, presents how and why doctors of chiropractic (DCs) should become members of the primary care team as neuromusculoskeletal practitioners to treat patients with chronic pain. The authors stress that chiropractic clinicians may play a valuable role in the primary care setting by helping to evaluate and manage patients suffering with acute and chronic pain caused by neuromusculoskeletal conditions.

By James J. Lehman, DC, Daren Anderson, MD, and Michael Taylor, DC

Chronic Pain Treatment/Primary Care

Chronic pain affects more than 100 million people in the United States and leads to more than $635 billion per year in costs attributable to medical treatment and lost productivity (IOM cost of pain in America). Chronic back pain is the No. 1 cause of job-related disability according to the National Center for Health Statistics.The majority of patients with chronic pain will seek treatment from a primary care provider.[2]

Chronic Pain and Illness

When pain persists for months or even years, long after whatever started the pain has gone or because the injury continues, it becomes a chronic condition and illness in its own right.

As implementation of the Patient Protection and Affordable Care Act (PPACA) and the National Prevention Strategy moves health care from a system of sick care to one based on wellness and prevention,[5] it is likely that primary care providers will increasingly be called on to provide treatment of chronic pain through coordinated care.

A special committee with a panel of adult and pediatric pain experts was convened to explore issues related to pain and the practice of medicine. This panel included anesthesiologists, neurologists, primary care physicians, emergency physicians, nurses, pharmacists and psychologists who proclaimed that it was time to revolutionize the treatment of chronic pain in America. Current deficiency in the training of primary care providers in pain management represents an opportunity for reform and to promote the integration of healthcare professionals, including chiropractic physicians to offer holistic, evidence-based and patient-centered services.

Most people in pain, including those with chronic symptoms, go to primary care providers to get relief. But current systems of care do not adequately train or support internists, family physicians and pediatricians, the other healthcare providers who provide primary care in meeting the challenge of treating pain as a chronic illness. Primary care providers often receive little training in the assessment and treatment of complex chronic pain condition.[6]

Project ECHO, CHCI and Integration

The Stepped Care Model for Chronic Pain (SCM-PM) is a population-based strategy advocated by the American Academy of Pain Medicine for pain management that has been adopted by the Veterans Health Administration (VHA) as its standard for pain care. The SCM-PM calls for primary care-based screening and routine management of pain with additional resources provided for more complex cases. The model has resulted in improved patient outcomes for pain in several VHA settings.[7,8,9]

Outside the VHA setting, chronic pain is also a common condition,

James J. Lehman, DC, MBA, FACO

Dr. James J. Lehman is an associate professor of clinical sciences and director of health sciences postgraduate education at the University of Bridgeport. He is a board-certified chiropractic orthopedist and neuromusculoskeletal medicine specialist at the Community Health Center Inc., in Waterbury, Conn., a federally qualified health center and a patient-centered medical home. Dr. Lehman teaches non-surgical orthopedics, neurosciences, neuromusculoskeletal medicine, evidence-based practice and health care reform classes for the University of Bridgeport. He also serves as the team chiropractor for the Bridgeport Bluefish pro baseball team and mentors fourth-year chiropractic clerks and chiropractic residents in orthopedics/neuromusculoskeletal medicine. He can be contacted at *jlehman@bridgeport.edu.*

Daren Anderson, MD

Dr. Daren Anderson is a general internist and vice president/chief quality officer of Community Health Center, Inc. and associate professor of medicine at Quinnipiac University. CHCI is a multisite community health center providing primary care to more than 130,000 medically underserved patients across Connecticut.

Dr. Anderson is also the director of the Weitzman Institute, a center dedicated to health services research in underserved settings and the development and promotion of new approaches to systems redesign and quality improvement. At the Netter School of Medicine at Quinnipiac University, he teaches and mentors students in quality improvement and applied research in community settings.

Michael Taylor, DC, DABCI, APC

The American Board of Chiropractic Internists certifies Dr. Michael Taylor as a diplomate chiropractic internist. He is also an advanced practice chiropractic physician by the New Mexico Board of Chiropractic Examiners. Dr. Taylor is certified in manipulation under anesthesia and in chiropractic injectable nutrients. He has taught a variety of clinical topics for several chiropractic post-graduate departments. He is the past president of ACA's Council on Diagnosis and Internal Disorders, Oklahoma Chiropractors' Association, Joint Chiropractic Association of Oklahoma and Oklahoma Association for Advanced Chiropractic Medicine. Dr. Taylor has been honored with the Oklahoma Chiropractic Physician of the Year award and is the developer of the Oklahoma Wellness Campaign. He is president of Marion Medical, P.C., a multispecialty clinic in Tulsa, Okla., and can be contacted at *drtaylor@healinginc.net.*

especially in safety net practices, such as Federally Qualified Health Centers (FQHC).[10] Whether or not the SCM-PM can improve pain outcomes in non-VHA settings, such as FQHC's, had not previously been determined. To address this question, we undertook a three-year quality improvement project named Project Stepping Out, aimed at adapting the SCM-PM and implementing it at Community Health Center, Inc. (CHCI), a large, statewide FQHC in Connecticut.

CHCI provides comprehensive, integrated primary care services including medical, dental and behavioral health care to more than 130,000 medically underserved patients in the state. More than 60 percent of CHCI patients are racial/ethnic minorities, more than 90 percent are below 200 percent federal poverty level, 60 percent are on Medicaid or state insurance and 22 percent are uninsured. Each CHCI patient has a designated primary care provider.

Project Stepping Out developed a modified version of the SCM-PM that incorporated the basic elements of stepped care customized to reflect the unique characteristics of the FQHC practice. The principal goals of the project included: 1) improving the ability of the primary care team to screen for and manage routine pain complaints by following protocols and using basic tools to improve the assessment, documentation, treatment and monitoring of pain; 2) providing additional resources and supports, including on-site access to behavioral health and chiropractic treatment to assist primary care providers (PCPs) in managing more complex cases; and 3) providing PCPs access to a multidisciplinary pain-management consultation via teleconference using Project ECHO.

To address the deficiency of pain-management knowledge among PCPs, the project first provided additional education to all CHCI providers. Grand rounds presentations addressing pain-management best practices were given twice yearly, and providers completed online CME modules about pain management and opioid prescribing.

To improve monitoring and follow-up, formal policies were implemented requiring that all patients receiving chronic opioid therapy (COT) have a signed opioid treatment agreement (OTA), a urine toxicology screen at least once every six months and a functional assessment every three months. In addition, a clinical dashboard was introduced in which clinicians could view adherence rates and their panel of patients receiving COT.

Last, templates for the initial and follow-up assessment of pain were created within the electronic health record (EHR) to help clinicians improve documentation. These templates included elements necessary to appropriately document pain assessments, including presence and cause of pain, duration, location, other therapies tried, impact of current treatment, functional assessment, diagnostic images reviewed, functional goals established, OTA review, UDT results and signs of opioid misuse/aberrancy.

Additional on-site resources were added to help with more complex patients who fail to improve with routine primary care. While some specialties, such as physical therapy, addiction treatment, and surgical sub-specialties, required outside referral, Project Stepping Out brought chiropractic services to six of CHCI's largest sites.

Behavioral health (BH) services, available at CHCI for years, were further integrated by adding a BH provider to each clinical team. Medical teams were encouraged to refer patients with pain and co-existing BH and/or substance abuse issues to their BH provider for collaborative management.

The final element of the project was the introduction of Project ECHO Pain Management. Project ECHO is a weekly video conference joining PCPs with a team of specialists. Project ECHO Pain Management for this intervention was designed after the model developed by the University of New Mexico.[11,12,13,14] One primary care pain champion was selected from each CHCI site to participate in weekly ECHO sessions. The expert faculty team was comprised of specialists in pain management, including interventional pain management, behavioral health, addiction medicine, occupational medicine and pharmacy. Sessions lasted two hours and provided the opportunity to present and to learn from challenging cases. Didactics lasted no more than 30 minutes and covered a wide range of pain-management topics, including safe opioid prescribing, behavioral health interventions, pharmacologic interventions and complementary and alternative treatments, to name a few.

Over the three-year course of this intervention, a broad array of outcome measures demonstrated improvement. Surveys showed that CHCI providers increased their pain-management knowledge from an average score of 153 to 167 on the KnowPain-50, a validated knowledge assessment tool,[15] and that PCPs expressed increased confidence in their ability to manage pain. Chart reviews showed improvements in documentation. Adherence to policies on opioid treatment agreements and urine toxicology screening among patients who used opioids chronically (COT) increased from 49 percent to 64 percent and from 66 percent to 86 percent respectively. Functional assessment and referrals to behavioral health and chiropractic increased significantly. There was slight but significant decline in the prescribing of opioids for acute and chronic pain.

Pain management must become a core competency of primary care. This project demonstrated that a multifaceted approach focused on education, collaboration and use of supportive technologies could improve a wide range of pain-management outcome measures.

Common Neuromusculoskeletal Causes of Chronic Pain

Myofascial pain syndromes are very common causes of musculoskeletal pain and common manifestations of chronic pain.[16] Simons claims the most common type of neuromusculoskeletal pain is myofascial pain.[17] A clinician must identify the cause of the pain, which is often unrecognized myofascial trigger points.[18] Clinicians treating chronic pain must recognize the diagnostic criteria for myofascial pain[19]:

1. Localized pain in a taut band of muscle;
2. Local twitch response to fiber stimulation of the taut band;
3. Pain to deep palpation that is recognized as pain;
4. Referred pain to a characteristic distant region based on myofascial referral maps;
5. Restricted movement in joints related to muscle;
6. Weakness that is not caused by neurological compromise; and
7. Autonomic dysfunction.

Low-back pain is the most common neuromusculoskeletal symptom presenting to primary care providers and the fifth most common cause for all physician visits.[20] Another common neuromusculoskeletal condition treated by PCPs is shoulder pain.[21] Whiplash injuries are becoming more frequent in the United States and the rest of the world.[22] Recent data indicate three million Americans suffer from whiplash annually.[23] Unfortunately, incomplete recovery from whiplash-type injuries contributes to the incidence of chronic neck pain.[24] Neck and cervical muscle pain accompany primary cephalgia,[25] while cervicogenic headaches affect 20 percent of patients presenting with chronic headache syndromes.[26]

Chiropractic and Chronic Pain

Kettner says that pain management is an emerging chiropractic specialty with potential to contribute to the broader field of pain medicine, but he also questions whether it is possible to integrate chiropractic into a traditional medical system.[27] One Health Maintenance Organization (HMO) experiment at the Lovelace Health Care System in Albuquerque, N.M., demonstrated that physicians were willing to refer patients to DCs when they perceived it is in the best interest of their patients (i.e., patient-centered) and they were satisfied with the results of chiropractic care.[28] Today's best available evidence demonstrates chiropractic manipulation to be less expensive and more effective than the usual care by PCPs for low-back pain, shoulder pain/disability and neck pain.[29] In addition, there is evidence that suggests chiropractic care benefits patients suffering with migraine and cervicogenic headaches.[30]

Scope of Practice and Chronic Pain

A limited number of practice acts permit chiropractic physicians with advanced training and credentialing an expanded scope of practice, which includes prescriptive authority.

It is estimated that doctors in Oklahoma have administered well over 300,000 micronutrient intravenous infusions, tens of thousands of trigger-point injections, thousands of intra-articular injections and in excess of 2.5 million intramuscular injections. As a result, DCs in Oklahoma who have the injection credential have become a conservative PCP of choice when treat-

ing patients with chronic pain, as well as a host of other conditions.[31]

A typical chiropractic patient with chronic pain presents with persistent trigger points. A subset of these patients who do not adequately respond to standard chiropractic manual medicine interventions or modalities could be candidates for trigger-point injection therapy. An injection of cyanocobalamin and Traumeel into the core of the trigger point in a retrograde injection manner of at least three quadrants may release persistent, active trigger points with significant relief of the patient's chronic pain.[32]

DCs as Valuable Members of the Primary Care Team

If you desire to become a valuable member of a primary care team within a coordinated care organization, you will need to educate yourself, research the current state of health care reform and determine the existing coordinated care organizations in your area. Then you will need to educate physicians and coordinated care organizations about your value. Since most physicians do not know a DC or routinely make referrals to them,[33] you must overcome this barrier to entry. You should provide evidence that integration of

chiropractic into a primary care environment can reduce the prescription of opioid medications for patients suffering with chronic neuromusculoskeletal conditions.[34]

Primary care providers will make referrals to specialists. So what must you do to become a credentialed specialist? You must integrate into coordinated care organizations as a neuromusculoskeletal medicine specialist and become a medical staff member.

Bill Morgan, DC, described what chiropractic clinicians should expect to expedite the process when seeking hospital credentials and privileges,[35] and you may anticipate similar requirements to join coordinated care organizations:

- Work history
- Certification of education
- College degree
- Chiropractic college degree
- Internships
- Residencies (if appropriate)
- Fellowships (if appropriate)
- Advanced training or certifications
- Peer and professional references (usually within two years)
- Hospital affiliations
- State licensures (all states or territories where you have been licensed)
- Claims history (including current and past insurance carriers).

The Community Health Center, Inc., of Middletown, Conn., requires chiropractic physicians to include board certification in a chiropractic specialty, teaching experience, license to practice chiropractic in Connecticut and professional liability insurance.[36] It seems reasonable to assume that other Federally Qualified Health Centers or Patient-Centered Medical Homes will require PCPs and specialists to be board certified. Health care reform calls for improved quality of care; health centers and patients expect providers to demonstrate exceptional expertise in their specialty or subspecialty.

> *Medical specialty certification in the United States is a voluntary process. While medical licensure sets the minimum competency requirements to diagnose and treat patients, it is not specialty-specific. Board certification – and the Gold Star – demonstrates a physician's exceptional expertise in a particular specialty and/or subspecialty of medical practice.*
>
> *The Gold Star signals a board-certified physician's commitment and expertise in consistently achieving superior clinical outcomes in a responsive, patient-focused setting. Patients, physicians, healthcare providers, insurers and quality organizations look for the Gold Star as the best measure of a physician's knowledge, experience and skills to provide quality health care within a given specialty.*[37]

Primary care providers will expect you to provide high-quality, evidence-based and

patient-centered chiropractic services as a DC and a board-certified specialist. Integration of chiropractic services into coordinated care organizations will improve access to patients with neuromusculoskeletal injuries or diseases that are in need of conservative neuromusculoskeletal medicine.

The authors pose the following question to the chiropractic profession: "Will chiropractic physicians attempt to integrate coordinated care systems or prefer to remain as portal of entry providers and function outside of the system?"

Conclusions

There is an obvious need in the United States to improve the evaluation and management of patients with chronic pain, and chiropractic services may be part of the solution.

Chiropractic physicians with an interest in treating chronic pain patients should consider joining coordinated care organizations as members of the primary care team.

The chiropractic physician can participate in the care and delivery of a variety of clinical interventions to address a number of patients suffering with neuromusculoskeletal conditions concomitant with chronic pain.

Chiropractic clinicians with specialty certification have the training and credentials necessary to apply for medical staff privileges within coordinated care organizations, such as Accountable Care Organizations, Community Health Centers and Patient-Centered Medical Homes.

When chiropractic specialists integrate the healthcare system of the future, board certification will help to determine their status. The lack of board certification may limit the status of chiropractic physicians to that of mid-level providers or even prevent hiring. ■

Endnotes

1 Blondell RD and Ashrafioun L. Treating Opioid Dependency and Coexistent Chronic Nonmalignant Pain. *Am Fam Physician.* 2008 Nov 15;78(10):1132-1133.

2 Breuer B, Cruciani R, Portenoy RK. Pain management by primary care physicians, pain physicians, chiropractors, and acupuncturists: a national survey. *South Med J.* 2010 Aug; 103(8):738-47.

3 Jackman R, Purvis JM, Mallett BS. Chronic nonmalignant pain in primary care. *Am Fam Physician*. 2008; 78(10):1155–1162.

4 CDC. Opioids drive continued increase in drug overdose deaths. *Drug overdose deaths increase for 11th consecutive year.* Feb. 20, 2013 [cited July 28, 2014]. Available from: *www.cdc.gov/media/releases/2013/p0220_drug_overdose_deaths.html.*

5 National Prevention Council, *National Prevention Strategy*, Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General, 2011[Cited July 25, 2014]. Available from: *www.surgeongeneral.gov/initiatives/prevention/strategy/report.pdf.*

6 The Mayday Fund. A Call To Revolutionize Chronic Pain Care in America: An Opportunity for Health Care Reform.

7 Kroenke K, Bair M, Damush T, et al. Optimized Antidepressant Therapy and Pain Self-management in Primary Care Patients with Depression and Musculoskeletal Pain: A Randomized Controlled Trial. *JAMA* 2009; 301: 2099-2110.

8 Kroenke K. Patients presenting with somatic complaints: epidemiology, psychiatric comorbidity and management. *International Journal of Methods in Psychiatric Research* 2003; 12: 34-43.

9 Dobscha SK, Corson K, Perrin NA. Collaborative Care for Chronic Pain in Primary Care: a Cluster Randomized Trial. *JAMA* 2009 Mar 25; 301: 1242-1252.

10 Anderson D, Wang S, Zlateva I. Comprehensive assessment of chronic pain management in primary care: a first phase of a quality improvement initiative at a multisite Community Health Center. *Quality in Primary Care* 2013; 20: 421-433.

11 Katzman JG, Comerci G, Boyle JF, et al. Innovative Telementoring for Pain Management: Project ECHO Pain. *J Contin Educ Health Prof* 2014; 34: 68-75.

12 Arora S, Thornton K, Murata G, et al. Outcomes of treatment for hepatitis C virus infection by primary care providers. *N Engl J Med* 2011.

13 Arora S, Kalishman S, Dion D, et al. Partnering urban academic medical centers and rural primary care clinicians to provide complex chronic disease care. *Health Aff* 2011; 30: 1176-1184.

14 Arora S, Thornton K, Murata G, et al. Project ECHO Expands Access to Hepatitis C (HCV) Treatment in Rural Areas and Prisons. Treatment is as Effective as a University HCV Clinic. *J Hepatol* 2011; 54: S161-S161.

15 Harris Jr JM, Fulginiti JV, Gordon PR, et al. KnowPain-50: A Tool for Assessing Physician Pain Management Education. *Pain Medicine* 2008; 9: 542-554.

16 Simons DG, Travell JG. Myofascial pain syndromes. In: Wall PD, Melzack R, editors. Textbook of pain. New York (NY): Churchill Livingstone; 1989. p. 368–85.

17 Simons DG, Travell JG. Myofascial Pain and Dysfunction: The Trigger Point Manual. Vol 1. Upper Half of Body. Baltimore: Williams and Wilkens (1999).

18 Simons DG. Understanding the Effective Treatment of Myofascial Trigger Points. *Journal of Bodywork and Movement Therapies* (2002) 6(2), 81-88.

19 Gerwin RD, Shannon S, Hong CZ et al. Interrater reliability in myofascial trigger point examination. *Pain* 1997;69(1-2)65-73.

20 Deyo RA, Weinstein JN: Low back pain. *N Engl J Med* 344:363, 2001.

21 Steinfeld R, Valente RM, Stuart MJ: A commonsense approach to shoulder problems. *Mayo Clin Proc* 74:785, 1999.

22 Jakobsson L, Norin H, Isaksson-Hellman I. Parameters influencing the risk of AIS 1 neck injuries in frontal and side impacts. Proceedings. International Research Council on the Biomechanics of Impact (IRCOBI) Conference. Montpellier, France, 2000.

23 Freeman MD, Croft AC, Rossignol AM, Centeno CJ, Elkins WL. Chronic neck pain and whiplash: a case-control study of the relationship between acute whiplash injuries and chronic neck pain. *Pain Res Manag.* 2006;11(2):79-83.

24 Cassidy JD, Carroll LJ, Cote P, et al: Effect of eliminating compensation for pain and suffering on the outcome of insurance claims for whiplash injury. *N Engl J Med* 342:1179, 2000.

25 Blau JN, MacGregor EA. Migraine and the neck. *Headache.* 1994;34:88-90.

26 Haldeman S, Dagenais S. Cervicogenic headaches: a critical review. *Spine J.* 2001 Jan-Feb;1(1):31-46.

27 Contemporary Pain Medicine: Integrative Pain Medicine: The Science and Practice of Complementary and Alternative Medicine in Pain Management. Edited by Audette JF, Failey A. Kettner NW. *Chiropractic Pain Management: An Integrative Approach* (16)333-351. Copyright 2008 Humana Press.

28 Pasternak DP, Lehman JJ, Smith HL, Piland NF. Can medicine and chiropractic practice side-by-side? Implications for healthcare delivery. *Hosp Top* 1999;77:8-17.

29 Tsertsvadze A, Clar C, Court R, Clarke A, Mistry H, Sutcliffe P. Cost-Effectiveness of Manual Therapy for the Management of Musculoskeletal Conditions: A Systematic Review and Narrative Synthesis of Evidence From Randomized Controlled Trials. *J Manipulative Physiol Ther.* 2014 Jun 27

ACA on the Chiropractic Summit's Drug-Free Approach

At the end of February 2014, the American Chiropractic Association's (ACA) House of Delegates (HOD) adopted language describing the profession's approach to health care and the use of drugs by chiropractic physicians during its annual meeting in Washington, D.C.

The statement was originally written and approved by the Chiropractic Summit, an umbrella leadership group of more than 40 prominent chiropractic organizations during a meeting in Seattle in November 2013. The statement reads, in part:

Summit Promotes Drug-Free Approach:

"The drug issue is a non-issue because no chiropractic organization in the Summit promotes the inclusion of prescription drug rights and all chiropractic organizations in the Summit support the drug-free approach to health care."

As you can imagine, this statement was crafted very carefully and after long discussions by all participants of the Summit, which includes organizations and individuals from all corners of the profession and with widely varying viewpoints. When the group first approached the task, it realized that the profession could not legitimately use the word drugless to describe itself. Surprised? It makes sense when you consider the U.S. Food and Drug Administration (FDA) classifies the use of certain vitamins and supplements to treat a condition a form of drug use. With so many doctors of chiropractic using nutritional therapy to help their patients, it was obvious to even the most conservative among us that "drug-free approach" more accurately describes what chiropractic physicians all do.

Granted, there are wide variations in the scope of practice for chiropractic based on the state in which DCs practice. Some states are quite expansive in what they allow doctors of chiropractic to do; others are rather restrictive. The Summit's role is not to define scope (that is the function of the states themselves), so any statement on chiropractic practice drafted — to be accurate — needed to keep into account those who may have more tools in their toolbox.

Nevertheless, the approach that **all** doctors of chiropractic take, regardless of their available tools for patient care, is first and foremost drug-free. This is what unites us; we as a profession can be proud that the organizations representing the Chiropractic Summit came together and unanimously agreed on this very positive and powerful statement. For more on the Chiropractic Summit, go to *www.chirosummit.org.*

[cited July 25, 2014]. Available from: *www.ncbi.nlm.nih.gov/pubmed/24986566.*

30 Bryans R, Descarreaux M, Duranleau M, Marcoux H, Potter B, Ruegg R, Shaw L, Watkin R, White E. Evidence-based guidelines for the chiropractic treatment of adults with headache. *J Manipulative Physiol Ther.* 2011 Jun;34(5):274-89.

31 Michael Taylor, DC, DABCI, "How Are We Doing After 20 Years of Chiropractic INP? The Oklahoma Story" *Dynamic Chiropractic* – Jan. 14, 2002, Vol. 20, Issue 02.

32 David J. Alvarez, D.O., and Pamela G. Rockwell, D.O., University of Michigan Medical School, Ann Arbor, Michigan: "Trigger Points: Diagnosis and Management" *Am. Fam. Physician.* 2002 Feb 15;65(4):653-661.

33 Barry R Greene, Monica Smith, Veerasathpurush Allareddy, Mitchell Haas. Referral patterns and attitudes of Primary Care Physicians towards chiropractors. *BMC Complement Altern Med.* 2006; 6: 5.

34 Silvano Mior, Brian Gamble, Jan Barnsley, Pierre Côté and Elie Côté. Changes in primary care physician's management of low back pain in a model of interprofessional collaborative care: an uncontrolled before-after study. *Chiropractic & Manual Therapies* 2013, 21:6.

35 Morgan W. Hospital Credentials and Privileges. Knowing what to expect can help expedite the process. *ACA News* [cited July 28, 2014]. Available from: *www.acatoday.org/content_css.cfm?CID=3270.*

36 Lehman JJ. Healthcare Reform: Implications for Chiropractic. *ACA News* Dec 2013 [cited July 28, 2014] Available from: *www.acatoday.org/content_css.cfm?CID=5363.*

37 What Board Certification Means. American Board of Medical Specialties [cited July 28, 2014]. Available from: *www.abms.org/About_Board_Certification/means.aspx.*