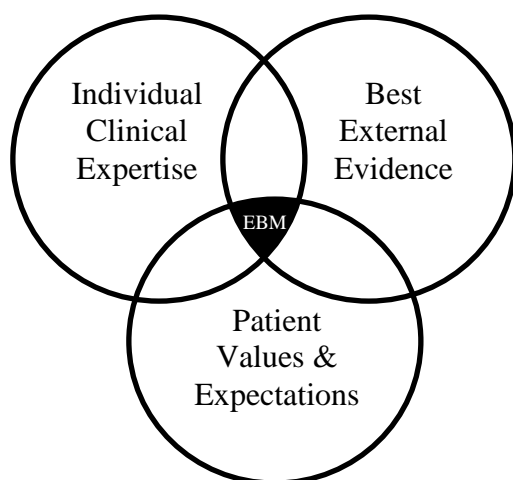


EVIDENCE-BASED PRACTICE

Evidence-based practice is defined as “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.”¹ Increasingly, high-quality research evidence is the cornerstone to evidence-based healthcare decisions and is critically important to physicians, patients, policymakers and payers. This data-driven evolution will impact the chiropractic profession in important ways. It has the potential to serve as the play-field leveler that the chiropractic profession has long demanded. However, it also forces us to collect and interpret data correctly. This paper provides a very brief summary of the state of the evidence in chiropractic related to clinical outcomes, cost, safety and patient satisfaction. It also identifies areas where more research is needed.



Evidence-based Triad

The evidence-based triad illustrates an approach to decision making that integrates the chiropractic physician’s individual clinical expertise with the best external evidence while taking into account a patient’s values and expectations of care.

Clinical Outcomes

LOW BACK PAIN

- There is moderate evidence to support that spinal manipulative therapy is effective for acute low back pain in adults. There is strong evidence to support that spinal manipulative therapy is effective for chronic low back pain in adults.^{2,3}
- A joint clinical practice guideline from the American College of Physicians and the American Pain Society suggests that “For patients who do not improve with self-care options, clinicians should consider the addition of nonpharmacologic therapy with proven benefits-for acute low back pain, spinal manipulation; for chronic or subacute low back pain, intensive interdisciplinary rehabilitation, exercise therapy, acupuncture, massage therapy, spinal manipulation, yoga, cognitive-behavioral therapy, or progressive relaxation (weak recommendation, moderate-quality evidence).”⁴
- A 2011 Cochrane review reported that there are no clinically meaningful differences between spinal manipulative therapy and other interventions for pain reduction and functional improvement for chronic low back pain.⁵
- Results of a 2013 randomized controlled trials suggest that 12 sessions of spinal manipulative therapy for chronic low back pain offer the best “dose.”⁶
- There is strong evidence that spinal manipulative therapy is as effective as a combination of medical care and exercise instruction. There is moderate evidence that spinal manipulative therapy works as well as prescription nonsteroidal anti-inflammatory drugs combined with exercises. And, there is limited-to-

moderate evidence that spinal manipulative therapy works better than physical therapy and home exercise.⁷

NECK PAIN

- Results of a 2008 best evidence synthesis by the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders found that manual therapy combined with exercise was more effective than other noninvasive interventions for neck pain.⁸
- In a 2012 randomized controlled trial, spinal manipulative therapy was more effective than medication for acute and sub-acute neck pain for both short and long term outcomes.⁹

HEADACHE

- Studies indicate that spinal manipulative (SM) therapy is effective for cervicogenic and migraine headaches.^{2, 10}
- A 2008 literature review suggests that spinal manipulative therapy of the cervical spine may prevent migraines as well as amitriptyline and may be effective for tension-type headaches.¹¹
- Spinal manipulative therapy may be as effective as propranolol and topiramate for prophylaxis of migraine headache.¹²

Risks

- The rate of serious complications is 5-10 per 10 million adjustments.¹⁴
- There is no evidence of excess risk of VBA stroke associated with chiropractic care compared to primary care. Increased risks of VBA stroke associated with chiropractic and PCP visits are likely due to patients with headache and neck pain from VBA dissection seeking care before their stroke.¹³
- Possible side effects from SMT to the cervical spine include light-headedness or dizziness, sweating or a flushed feeling. These symptoms may occur right after a treatment and usually last only a few minutes.²³⁻²⁷
- Muscle or joint pain, fatigue, or muscle stiffness or soreness are also possible following spinal manipulation, generally lasting less than 24 hours.²³⁻²⁷

Costs

- Lower overall episode costs of care when low back pain treatment is initiated with DC as compared to care initiated with MD.¹⁵
- Chiropractic users with neck and back problems did not have higher levels of overall healthcare spending when compared to medical users in a nationally representative sample.¹⁶
- Direct costs associated with Medicare's 2005-2007 Demonstration could have been substantially lower had DCs in Chicago area counties responded similarly to other demonstration counties.¹⁷
- A 2013 prospective population-based cohort study of 1,885 workers found that only 1.5% of workers whose first provider was a chiropractic physician had lumbar spine surgery within 3 years compared with 42.7% of patients whose first provider was a surgeon.¹⁸

Patient Satisfaction

- Chiropractic patients are more satisfied than medical patients with their back care providers after 4 weeks of treatment.¹⁹
- Back pain patients are more satisfied with chiropractic care than with medical care.²⁰⁻²²

WHAT DO WE NOT KNOW?

Evidence Gaps

WHY ARE THERE GAPS IN WHAT WE KNOW ABOUT CHIROPRACTIC?

- Study results don't apply to all patient populations.
- Different studies use different methods to answer the same general question.
- Study design flaws, especially with studies that were conducted more than 10 years ago.
- Results from two or more studies may not be the same.
- In many areas we don't have enough studies, especially for conditions that are not musculoskeletal in nature.
- Quality of studies is sometimes poor from a clinical and/or scientific perspective.

WHAT QUESTIONS NEED TO BE ANSWERED?

- Can we predict which patients are most likely to respond best to chiropractic care?
- How well do DCs deliver prevention and wellness care?
- Do different chiropractic techniques have different patient outcomes?
- What happens when you combine therapies (PT, massage, etc.) with adjustments?
- Why do clinicians in private practice experience more dramatic outcomes than found in clinical trials?
- How does chiropractic help patients that are pediatric, elderly, or pregnant?
- How effective and reliable are DC diagnostic techniques?

SUMMARY: WHAT CAN WE SAY?

- Chiropractic management for low back pain, neck pain, and headache is as good as or better than other forms of conservative medical care.
- There is a very low risk of serious adverse events.
- Patient satisfaction with chiropractic is very high.
- Chiropractic care costs no more, and perhaps a bit less, than other conservative treatments for back and neck pain.

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