The clinical concept of subluxation has been one of the fundamental components of manipulative therapy theory since the founding of the chiropractic profession. However, this concept has been controversial from its beginning and continues to be so. Subluxation originally was a medical term that was adopted by DD Palmer to most closely describe the phenomenon that he experienced in his newly “discovered” clinical practice of chiropractic. While the medical term subluxation refers to an incomplete dislocation, the chiropractic concept of it has come to be thought of as involving disturbances of any of the features of articular anatomy and physiology including abnormality of motion, neurology, muscle, ligament, circulation, inflammation and others. The Association of Chiropractic Colleges’ definition of chiropractic subluxation states, “A subluxation is a complex of functional and/or structural and/or pathological articular changes that compromise neural integrity and may influence organ system function and general health.” Chiropractors, naturopaths and their patients report pain conditions as the primary reason for seeking manipulative therapy treatment. There is inconclusive evidence that subluxation is associated with visceral problems such as asthma, colic, vertigo, and others.

From an administrative perspective, “subluxation” is the most common diagnosis offered by chiropractors. The International Classification of Diseases (ICD) however does not include the term “chiropractic subluxation” in any of its definitions. Chiropractors’ use of ICD-9 codes to describe the chiropractic subluxation is inconsistent. ICD-9 codes for “Nonallopathic lesions, segmental or somatic dysfunction” (739.x) and “Other, multiple, and ill-defined dislocations” (839.x) are used variably to indicate a diagnosis of chiropractic subluxation. Certain insurance carriers have made local determinations about the ICD-9 codes that properly describe subluxation. In some states, chiropractic laws specify subluxation as the only acceptable diagnosis from a chiropractor. The diagnostic characteristics of subluxation have become
enshrined in Medicare policy (see addendum to this pathway). The term subluxation is inconsistently used by naturopathic physicians performing manipulative therapy.

**Subjective Findings and History**

- Most patients present with pain or tightness in the area of complaint.
- Onset may be acute or insidious.
- Pain or paresthesia may occur in the neurologic distribution or zone of referral of the involved structure. For example:
  - Cervical region – headaches, neck pain, dizziness, upper extremity pain and/or paresthesias.
  - Thoracic region – back pain, rib cage pain, referred arm or neck pain.
  - Lumbar and/or pelvic region – low back, pelvic or hip pain, lower extremity pain, and/or paresthesias.
- Peripheral joints-local pain, weakness, loss of motion.
- Inflammation, swelling.
- Stiffness, reduced range of motion.

**Objective Findings**

- Physical examination procedures are used to rule out the “red flags” of pathologic processes that can provide relative or absolute contraindication to manipulative therapy treatments.
- Examination findings to determine the presence of subluxation have not been thoroughly evaluated for reliability, specificity, and sensitivity, however there is stronger and more favorable evidence supporting procedures which use a direct measure involving pain provocation with palpation or localized tissue examination of the presumptive site. Other methods such as skin conductance or thermography tend not to be supported by the available evidence.
- Expert consensus has identified classes of findings that together indicate the presence of a subluxation including:
  - Pain / tenderness identified through observation, percussion, palpation, provocative orthopedic testing.
  - Asymmetric qualities on spinal segmental or sectional levels identified through observation, static palpation, diagnostic imaging.
  - Range of motion abnormality identified through motion palpation and stress x-ray examination.
  - Tissue tone, texture and temperature abnormality (of the skin, fascia, muscle, ligament) are identified through observation, palpation, and tests for muscle length and strength.

**Assessment**

- The clinical impression should indicate the specific anatomical structures involved and clinically correlate with the complaints, mechanism of injury, the history and objective findings.
• The patient’s condition must bear a direct relationship to the level of subluxation.
• The assessment should identify any barriers to recovery.

Plan

Passive Care:
• Manipulative therapy/adjustment, mobilization.
• Soft tissue techniques.
• Physical therapy modalities.
• Patients at risk for becoming chronic should have care plans that avoid physician dependence, limit passive care and encourage active care approaches.

Active Care:
• Active exercises/stretches for mobility and strength.
• Advise about work and non-work physical activity.
• Use of heat/ice.

Frequency and Duration of Treatment:
• The duration of treatment is driven by the patient’s response to treatment.
• Progressively declining treatment frequency is expected as the patient improves.
• One of the goals of treatment is moving the patient from passive to active care.
• The evidence for the duration of manipulative therapy is inconclusive.
• Duration and intensity of care should not extend beyond the time frame observed in the natural history of the condition.

Referral Criteria
Referral to an appropriate provider should be considered when:

• The presence of “red flags” of pathologic conditions are discovered.
• The patients presents with conditions that are outside the provider’s scope of practice.
• Failure to improve after appropriate trials of treatment.

Resources for Clinicians
Journal of Manipulative and Physiological Therapeutics (JMPT) is dedicated to the advancement of chiropractic health care. It provides the latest information on current developments in therapeutics, as well as reviews of clinically oriented research and practical information for use in clinical settings.
http://www.jmptonline.org/

Chiropractic & Osteopathy is the official journal of the Chiropractic & Osteopathic College of Australasia (COCA). COCA has agreed to cover the cost of article-processing charges for all papers submitted before March 2009. This will enable Chiropractic & Osteopathy to remain an international open access journal without charge to authors during this time.
http://www.chiroandosteo.com/
Resources for Patients
The American Chiropractic Association (ACA) is the largest professional association in the world representing doctors of chiropractic. As evidence supporting the effectiveness of chiropractic continues to emerge, health care consumers are turning in record numbers to chiropractic care — a form of health care aimed primarily at enhancing a patient's overall health and well-being without the use of drugs or surgery.
http://www.amerchiro.org/level1_css.cfm?T1ID=13

The National Center for Complementary and Alternative Medicine (NCCAM) is the Federal Government's lead agency for scientific research on complementary and alternative medicine (CAM). The mission of NCCAM is to explore complementary and alternative healing practices in the context of rigorous science. To view NCCAM’s Research Report About chiropractic and its use in treating low-back pain go to: http://nccam.nih.gov/health/chiropractic/

The Evidence

Mirtz TA; Morgan L; Wyatt LH; Greene L; “An epidemiological examination of the subluxation construct using Hill’s criteria of causation.” Chiropractic & Osteopathy, 2009; 17.


Welch A. “Sympathetic and parasympathetic responses to specific diversified adjustments to chiropractic vertebral subluxations of the cervical and thoracic spine”. Journal of CHIROPRACTIC MED, Sep 1, 2008; 7(3): 86-93.


**Clinical Pathway Feedback**

CHP desires to keep our clinical pathways customarily updated. If you wish to provide additional input, please use the e-mail address listed below and identify which clinical pathway you are referencing. Thank you for taking the time to give us your comments.

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