

IV. Historical & Current Perspective

RECOMMENDATION

Chiropractic radiography to assess spinal position is a procedure practiced by the majority of chiropractic clinicians in recent and past surveys; as such it can be considered an integral part of the standard of care in clinical evaluation of a presenting patient. The PCCRP Guidelines in Section II are recommended for Chiropractic clinical practice.

Supporting Evidence: Historical Literature Surveys, Professional Surveys, and Biomechanics Studies.

PCCRP Evidence Grade: Professional Surveys and Biomechanics Studies = a.

Introduction

Historically, radiographic spinal analysis has been an integral part of a Chiropractic evaluation. The use of x-ray for clinical decision making dates back to BJ Palmer in 1910. In the interval 1910-1950, many Chiropractic Techniques were originated that used x-ray to determine subluxation listings (PRS, PLI, body right, Upper Angle, Lower Angle, PIEX, etc). These include HIO,²⁵ Wernsing's Atlas Specific,³⁷ Grostic,^{10,11} Gonstead,^{16,28} Diversified,¹⁷ Zimmerman's Specific Adjusting,³⁹ and Logan Basic.¹⁹

After 1950, several new adjustive technique systems that utilized x-rays for clinical decisions were invented: Mears,²² Atlas Orthogonal,³² Life Cervical,¹⁸ Pettibon,²⁶ CBP,^{13,14} Blair,⁴ Pierce-Stillwagon,²⁷ Toftness,³³ Barge's Tortipelvis and Torticollis,^{1,2} Orthospinology,²¹ Stucky Integrated Methods,³¹ and NUCCA.^{8,9} Since 1947, Diversified has continued to be taught as a system which utilized a specific spinal listing obtained from x-ray analysis.^{3,5,6,17,24,29,30,34,35,38}

Initial radiographs are a necessity in some of the chiropractic techniques practiced by the majority of chiropractors. This is evident by the National Board of Chiropractic Examiners' surveys on utilization of techniques in the past few years.²³ It is known from these surveys that Gonstead, HIO, Logan Basic, and Pierce-Stillwagon are four of the most prevalent chiropractic techniques and radiographic analysis is a necessity in the majority of these techniques.²³

In a survey of 108 participating North American practices, Hawk et al⁴⁰ (their Table 10, page 167) reported Chiropractic Biophysics (CBP®) technique to be the 8th most utilized technique in chiropractic practices. Of interest, CBP® recommends initial full spine radiographic evaluation of presenting patients be performed by chiropractic clinicians. Truth be known, a plethora of techniques taught in Chiropractic Colleges utilize initial radiographic analysis of presenting patients.^{1-11,13-14,16-19, 24-32,34-35,38}

In national and international surveys specific to the topic of radiography utilization in chiropractic practice, it is found that Spinography is a primary assessment procedure utilized by more than 50% of the profession on at least 60% of their presenting patients.^{12,20,40,43-49}

However, in surveys specific to lower back pain, Chiropractors in North America utilize spinal radiography on their presenting patients at a frequency of 64%-95%.⁴⁷⁻⁴⁹ For example, in a survey of low back pain patients presenting to 32 urban and 32 rural Chiropractors, Carey and Garret⁴⁷ found that 62% of the patients seen by chiropractors and 70% of those seen by orthopedic surgeons received spinal radiography. In another survey of 50% of Washington State Chiropractors (209 responded) and 476 Family Physicians in active practice, Cherkin et al⁴⁸ posed the utilization rate of lumbar x-rays for three hypothetical patients with increasing severity of low back pain and duration. Chiropractors reported a utilization rate of lumbo-sacral radiography from 92%-95% whereas Family Physicians reported that they would utilize

radiography 10%-93% for the 3 cases. Of interest, 10-22% of the Chiropractors reported that they would order cervical spine and full spine radiography as well. Lastly, in a small sample of 32 chiropractors from Ontario, Canada, Ammendolia et al⁴⁹ reported that 63% of the Chiropractors in the intervention group and 54% in the control group requested lumbar radiography in 'uncomplicated acute low back pain patients; 68% of the intervention and 64% of the control chiropractors believed radiography was useful in these cases.

The increased utilization rates of spinal radiography by Chiropractors, is likely a result of different philosophies, analysis, treatment approaches, and treatment outcomes inherent in Chiropractic. Because a majority of Chiropractors utilize radiographic analysis for biomechanical evaluation of the patient's structural spinal position/abnormality (subluxation defined in Section V), the use of initial x-rays for biomechanical evaluation of the spine can be considered part of the standard of practice for clinical chiropractic.^{12,20,40,43-49}

Additionally, abnormal postural displacements of the head, thorax, and pelvis (main motions) are known to cause spinal displacement patterns (coupled motion), and thus, abnormal posture is a type of spinal subluxation (see Section V) and is reason enough to take routine x-rays on presenting patients for subluxation detection. The measurements gathered from the posture and x-rays of the spine are used by chiropractic clinicians to uniquely determine the specific interventions chosen for each individual patient.^{1-11,13-19, 24-32,34-35,38}

Also, it is noted that the ACA Technique Council meeting on March 13, 1992 identified the 15 Chiropractic Technique methods taught at Chiropractic colleges. These were/are Diversified, Gonstead, NUCCA, Grostic, CBP®, Logan Basic, Meric, Toggle-recoil, Cox, Thompson, Activator, SOT, AK, Nimmo, and Motion Palpation. It is noted that at least the first 9 of these techniques in this list utilize initial x-ray for either spinal diagnosis and/or decision on a subluxation listing.

Lastly, in a summary of the various historical and current chiropractic identity groups, Keating⁴¹ noted that all groups agreed that a primary method for spinal evaluation was spinal radiography. Keating's⁴¹ table 2-8 is reprinted here in an adapted form for this document; see Table 1.

Table 1.

Historical and current chiropractic identity groups, their method of evaluation of spinal disorders, and professional advocates. Adapted from Keating⁴¹ Table 2-8, page 57.

Chiropractor's Role	Primary Spinal Evaluation Method	Professional Organization Advocates
Primary care physician	Radiography	American Chiropractic Association (ACA), Council on Chiropractic Education (CCE), ACA-Council on Diagnosis and Internal Disorders (CDID)
Musculoskeletal specialist	Radiography	ACA, CCE, American Council on Chiropractic Orthopedics (ACCO)
Chiromedical specialist	Radiography	National Association of Chiropractic Medicine (NACM)
Radiologist or other diagnostician	Radiography	ACA, CCE, American College of Chiropractic Radiologists (ACCR)
Adjustor 1	Radiography	ACA, CCE, International Chiropractor's Association (ICA)
Adjustor 2	Radiography	ACA, CCE, ICA
Adjustor 3	Radiography	Federation of Straight Chiropractic Organizations (FSCO), Straight Chiropractic Academic Standards Association (SCASA)
Adjustor 4	Radiography	FSCO, SCASA

Summary

Chiropractic pioneers were among the first to use radiography/Spinography to evaluate spinal structural positions. Historical and current chiropractic technique systems taught in the majority of chiropractic colleges and in continuing education courses recommend radiography to assess spinal subluxation and to determine treatment intervention strategies. Chiropractic professional identity groups and organizations recommend radiography as a primary evaluation/assessment method. Thus, it is our expert panel's consensus that historically and currently, chiropractic professional organizations, clinicians, systems, and techniques recommend radiographic evaluation of spinal position, kinematics, and abnormalities to comprehensively evaluate and develop treatment interventions for a given patient.

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