

Preface

A. Preamble

These Best Practices and Practice Guidelines, written for and by International Chiropractors Association members, contained herein, are evidence-based suggestions for appropriate care of patients seeking chiropractic care.

While no guideline can replace the clinical decisions made by a chiropractic practitioner in the course of caring for an individual patient's health problem, the suggestions contain herein, are based on the best available published evidence. Any approach, by a practitioner, that is different from these ICA-BPPG Guidelines, does not necessarily mean that the approach in question was below the standard of care. However, any chiropractic practitioner, who adopts a course of action different from these ICA-BPPG Guidelines, is advised to keep sufficient patient records to explain why such an action was undertaken.

Chiropractic is a philosophy, a science, and an art. The nature of a science is that it is constantly evolving. Due to the variety, complexity, severity, and intricacy of human health conditions it is impossible to always determine the appropriate examination, appropriate diagnostic analyses, and to predict with absolute certainty the patient's response to chiropractic spinal care. Therefore, adherence to these ICA-BPPG Guidelines will not always ensure that an accurate assessment and care of the patient's spinal health has occurred, but adherence to these ICA-BPPG Guidelines will assist the practitioner by allowing him to practice based on the most current scientific data available. However, to do so without also combining it with all the knowledge and skills of a doctor of chiropractic may result in an inaccurate assessment and care of the patient. By following the ICA-BPPG Guidelines, it is expected that the chiropractic practitioner will follow a reasonable course of action based on the best available knowledge. It is expected that with the assistance of the ICA-BPPG Guidelines, the chiropractic practitioner will use the assessment and care of spinal subluxation suggested herein to deliver safe and effective chiropractic care.

B. Purpose/Aims, Clinical Questions, Patient Population, Intended Users

The purposes of these ICA-BPPG Guidelines are to (1) locate and rate the evidence for Chiropractic Care of a variety of health conditions, and (2) assist the practicing Chiropractor in making sound, fundamental, clinical decisions when providing Chiropractic Care in clinical practice.

Previous and current competing practice guidelines for the Chiropractic profession, e.g., Mercy Center Guidelines and Council on Chiropractic Guidelines and Practice Parameters (CCGPP) have attempted to restrict Chiropractic practice to axial pain subjects, (CCGPP does have a chapter on non-musculoskeletal, in which it was claimed that only 3 conditions had research support) i.e., potential patients with only head aches, neck pain, thoracic pain, and/or low back pain.

However, the CCGPP Guidelines are selective in that only Level 1 (RCT) and Level 5 (personal opinion) evidence were included in their initial Low Back Draft. According to a 2003 survey of 687 North American Chiropractic respondents conducted by Ohio Northern University, almost 90% of practicing Chiropractors agree with the concept that the adjustment should not be limited to musculoskeletal conditions. Therefore, the ICA-BPPG Guidelines aims to identify, rate, and summarize all levels of evidence, with the exception of Level V (expert opinion), for chiropractic care in both pain and non-musculoskeletal health conditions.

According to this same Ohio Northern University survey, almost 90% of practicing Chiropractors adhere to the tenet that spinal subluxation creates interferences with normal nerve function.

This ICA document aims to examine evidence for chiropractic care in pain, non-pain, and non-musculoskeletal health conditions from all levels of evidence.

Depending on the spinal level and severity of subluxations, after unpredictable time periods, there may be any number of possible pathologies and health problems in the tissues supplied by these nerves. Since the nervous system regulates the function, the growth, and the repair of all tissues, it would be fundamentally illogical to restrict Chiropractic care to only those patient populations with pain.

After briefly reviewing basic anatomy texts, it is apparent that the vast majority of health problems fall under the umbrella of Chiropractic Clinical Practice. Looking at the human body from the inside-out in terms of nerve innervation, we may categorize human health conditions by the regions and tissues:

Innervation: Possible Anatomical Locations Involved in Disease

- A. Brain function can be altered as improper input from the various body tissues is integrated in higher levels of the brain;
- B. Cranial nerves below the tentorium (Cranial Nerves V-XII) can be stretched or compressed by spinal subluxation (e.g., loss of the cervical lordosis) altering the function of these nerves as they innervate the head, neck, and organs;
- C. Spinal cord tension, constriction, compression, blood profusion, etc. can be altered by various spinal subluxations creating alterations in any number of spinal cord tracts, neurons in the lateral horn cells, the dorsal root ganglia, etc.;
- D. Spinal innervation to the intrinsic spinal muscles and ligaments may be altered;
- E. Spinal innervation to the postural muscles (erector spinae) may be affected;
- F. Spinal innervation to the blood vessels may be altered (sympathetic and parasympathetic);
- G. Spinal innervation to the organs may be altered;
- H. Spinal innervation to the glands responsible for hormone production may be altered;
- I. Spinal innervation to the upper and lower extremities may be altered;
- J. Spinal innervation to the anterior trunk muscles may be altered (chest muscles, abdominal muscles);
- K. Spinal innervation to the skin may be altered.

From physiology, all health care providers are familiar with Wolff's Law (bone remodels to stress in accordance with mathematical laws) & Davis' Law (soft tissue remodels to stress). The ICA's Board of Directors has adopted Section V Practicing Chiropractors Committee on Radiological Protocols (PCCRP) X-ray Guidelines as the, "Biomechanical Description of Subluxation". When abnormal posture and/or abnormal spinal alignment is/are present in a subject's upright stance, there will be abnormal stresses and strains on the hard and soft tissues. These abnormal stresses cause pathologies, which may progress to disease. We may also categorize human health conditions by the regions and tissues looking at the body from the inside-out:

Wolff's Law & Davis' Law: Possible Anatomical Locations Involved in Disease

- L. Abnormal stresses on the hindbrain, cranial nerves 5-12, spinal cord, and nerve roots may create abnormal efferents and afferents to any part of the body;
- M. Abnormal stresses cause vertebral body, facet, and lamina remodeling (osteoarthritis);
- N. Abnormal stresses on the spinal ligaments (ALL, PLL, ligamentum flavum, facet capsular, intertransverse, interspinous, supraspinous) may lead to remodeling of these ligaments which may cause restricted motion and/or pain;
- O. Asymmetric efforts by the erector spinae muscles in response to abnormal loads may cause disc prolapse and/or rupture with pain and altered motion;
- P. Abnormal loads (asymmetric efforts by) on the erector spinae muscles may cause constant contracture and fibrous infiltration and/or other pathologies;
- Q. Abnormal loads on the mechanoreceptors may cause altered proprioception and altered reflexes through the cord and back through the Sympathetic chain to many tissues including the organs;
- R. Abnormal spinal alignment may cause altered stresses on the lower extremity (hip, knee, ankle, foot) causing any number of stress induced pathologies.

This list is not intended to be all inclusive. However, from this list of anatomical sites that may experience abnormal function, disease, and/or pathology, it is apparent that Chiropractic care has the potential to affect most human health problems by addressing abnormal spinal positions (subluxations). Understanding this potential of Chiropractic care to affect the vast majority of human health conditions, it seems reasonable to ask the question, "What evidence exists for the Chiropractic care of human health problems that are not just axial pain?" This ICA-BPPG Guidelines seeks to answer this question.

Aside From individuals with axial pain, patients who have been medical failures with a variety of diseases and structural abnormalities seek chiropractic care. For all these prospective patients, these ICA-BPPG Guidelines outline the state of evidence (Levels 1-4) for the Chiropractic care of a vast variety of health conditions.

Goals for these Guidelines:

- (1) independently identify and rate the Chiropractic Clinical studies evidence from the literature for the routine use of Chiropractic care in a variety of health conditions (Chiropractors have broad privileges to care for the public as mandated by Federal, State, and Provincial law)s,
- (2) support, with evidence, the use of Chiropractic care in pediatric cases,
- (3) indicate where (conditions, spinal and health) chiropractic research is needed,
- (4) provide Chiropractic College Instructors with the actual, updated, evidence for chiropractic clinical practice, in order that the proper information be shared with prospective chiropractors.

These Guidelines are intended to support the clinical decisions made by Practicing Chiropractors, not only in the USA and Canada, but in the world at large.

C. X-ray Protocols/Guidelines

Historically, subluxations have been determined by an x-ray examination. There are other means used by chiropractors to determine if a subluxation is present in a subject's spine. While the assessment of prospective patients and a working Chiropractic Clinical Impression (Chiropractic diagnosis) would include a radiographic examination, Radiological Guidelines (listed as "Indications for Spine Radiography in Children and Adults") have been recently written (see www.pccrp.org) for practicing Chiropractors. The ICA Board has adopted the PCCRP X-ray Guidelines as the Standard of Care for radiographic utilization by Chiropractors for the identification of the mechanical component of the subluxation. These PCCRP Guidelines"/"Indications", for spine radiographic examinations include, but are not limited to:

1. Abnormal gait
2. Abnormal posture
3. Any "Red Flag Conditions" covered in previous guidelines.
4. Axial pain
5. Birth Trauma (forceps)
6. Delayed developmental conditions
7. Eye and vision problems other than corrective lenses
8. Facial pain
9. Follow-up for previous deformity, previous abnormal posture, previous spinal subluxation/displacement, previous spinal instability
10. Headache
11. Hearing disorders, vertigo, tinnitus
12. Neurological conditions
13. Pain upon spinal movement
14. Post surgical evaluation
15. Radiating pain (upper extremity, intercostal, lower extremity)
16. Restricted or abnormal motion
17. Spasm, inflammation, or tenderness
18. Spinal deformity (Scoliosis, hyper-kyphosis, hypo-kyphosis)
19. Spinal Subluxation (defined in this document)
20. Suspected abnormal pelvic morphology
21. Suspected Congenital anomaly
22. Suspected osteoporosis
23. Suspected short leg
24. Suspected spinal degeneration
25. Suspected spinal instability
26. Systemic health problems (skin diseases, asthma, auto-immune diseases, organ dysfunction)
27. Trauma, especially trauma to the spine

Since the PCCRP (Radiological Guidelines) are thorough and comprehensive (more than 350 pages, 14 sections, and 2,000 references), the International Chiropractors Association has chosen not to repeat that exhaustive document. Therefore, to save space, the interested reader is referred to these radiological protocols at www.pccrp.org.

D. ICA-BPPG Guideline Development and Evaluation Process

1. Executive Committee

The ICA-BPPG Guidelines Committee was composed of 37 ICA members, of which there were 7 principal investigators:

Donald D. Harrison, PhD, DC, MSE	<i>Chair of the ICA-BPPG</i>
Leonard Siskin, BS, DC	<i>Vice-Chair, Principal ICA-BPPG</i>
Deed E. Harrison DC	<i>Principal ICA-BPPG Investigator</i>
Joseph W. Betz BS, DC	<i>Principal ICA-BPPG Investigator</i>
Joseph R. Ferrantelli, BS, DC	<i>Principal ICA-BPPG Investigator</i>
Dwight DeGeorge, MS, DC	<i>Principal ICA-BPPG Investigator</i>
Eric Huntington, DC	<i>Principal ICA-BPPG Investigator</i>

Committee members were chosen based on their membership in the ICA, their Chiropractic clinical practice experience, their position as educational experts in the Chiropractic profession, and/or their research publication experience in the Chiropractic sciences.

The principal investigators met over the internet, performed preliminary literature searches on Levels of Evidence, performed searches on the Rating of Evidence, and outlined the data base, in which Committee members entered their summaries of each clinical study and the particulars of the methods and results of each individual clinical study.

The 7 principal investigators then asked for ICA member volunteers, to miss practice time to travel to Evanston, Wyoming, Saugus, Massachusetts, Newark, New Jersey, and Annapolis, Maryland to attend Committee meetings where published clinical studies were scanned, read, rated, and referenced.

2. Committee Meeting Dates

The ICA-BPPG Committee met on:
 December 14-17, 2006 in Evanston Wyoming,
 January 11-14, 2007 in Evanston Wyoming,
 March 14-18, 2007 in Evanston Wyoming,
 June 14-17, 2007 in Evanston Wyoming,
 Aug 2-5, 2007 in Saugus, Massachusetts,
 September 27-29, 2007 in Annapolis, Maryland,
 November 16-18, 2007 in Newark, New Jersey, and
 December 7-9, 2007 in Evanston, Wyoming.

The average number of clinical articles that were scanned, read, rated, and referenced at each Committee meeting was approximately 182.

3. Writing of the Draft, Internal Review

The ICA-BPPG Executive Committee, together with ICA Staff members, especially Ronald M. Hendrickson, MSc. and Coralee Van Egmond, DC, FICA, wrote the initial Guideline draft. Upon completion of the initial draft, all ICA Committee members were asked to review the document in its entirety and complete a review form

(See Appendix 1). All Committee review forms were then analyzed by the Chair and the ICA-BPPG Executive Committee and the Guideline draft was revised accordingly.

Following this revision, the Committee members, who had criticisms of the initial ICA-BPPG draft, were then asked to review the document again and complete a second review from (Appendix 1). Thus, the ICA-BPPG Guidelines was subjected to two internal consensus reviews.

4. External Review

Following the 2 ICA-BPPG Guideline Committee draft reviews, the document was sent out for four phases of External Review. These four phases included:

- a. **Phase I:** The ICA-BPPG guideline was sent to a panel of 9 International Chiropractic experts. These 9 members were independent of the ICA-BPPG panel and were from the United States, Canada, Ireland, Great Britain, and Australia. The stipulation was that these individuals had to be involved in 1 of the following areas: Clinical research and private practice, Chiropractic Education at a CCE accredited Chiropractic College or University, hold a secondary JD (law) degree in addition to their DC degree, Editor in Chief of a peer-reviewed indexed Chiropractic research journal, and be in active clinical practice and actively involved in a major Chiropractic ‘political’ organization. These individual Chiropractic experts were asked to review and evaluate the ICA-BPPG guidelines with the AGREE Instrument.¹
- b. **Phase II:** A second set of independent chiropractic experts were sent the ICA BPPG Guideline draft at the same time as those in Phase I. This second set of experts consisted of chiropractors who simultaneously held Medical degrees. The stipulation was that the individual had to have been in active Chiropractic clinical practice for at least 5 years prior to attaining their Medical degree and switching their focus to active Medical clinical practice. We identified 3 experts that fit these criteria. These 3 experts were asked to review and evaluate the ICA-BPPG guidelines with the AGREE Instrument.¹
- c. **Phase III:** At the same time as Phases I and II, the ICA-BPPG guidelines were sent to the major Chiropractic political organizations for their review. These political organizations included:
 1. The International Chiropractors Association (ICA),
 2. The World Chiropractic Alliance (WCA),
 3. The American Chiropractic Association,
 4. The Canadian Chiropractic Association (CCA),
 5. The Chiropractic Association of Australia (CAA),
 7. The Chiropractic Association of Ireland (CAI),
 8. The World Federation of Chiropractic (WFC),
 9. The British Chiropractic Association (BCA),
 10. The FSCO,
 11. The New Zealand Chiropractic Association.These 11 Chiropractic political organizations were asked to review and evaluate the ICA-BPPG Guidelines with the AGREE Instrument.¹
- d. **Phase IV:** Following Phases I-III, a website was set up (at www.chiropractic.org) where the guidelines were posted and open for review from the Chiropractic

profession at large. The evaluation instrument in Appendix 1 was posted on the website and willing participants from the profession completed this form.

5. Discussion of Review Process

In each of the four Phases of ICA-BPPG Guideline review and evaluation, the ‘evaluators’ were given 4 weeks to complete their reviews. Following the completion of Phases I-III of the external review process, the 7 principle investigators of the ICA-BPPG evaluated all the submitted reviews. The validity and applicability of the comments/criticisms was evaluated using the AGREE Instrument¹ and a consensus of at least 4/7 (a majority) of principle investigators was needed prior to altering/revising the draft of the ICA-BPPG Guideline document. This was the 3rd draft of the document.

The fourth and final revision of the ICA-BPPG Guideline occurred following the comments from the Chiropractic Profession at large in Phase IV. The validity and applicability of the comments/criticisms was evaluated by the 7 principle investigators and a consensus of at least 4/7 (a majority) of principle investigators was needed prior to altering/revising the draft of the ICA-BPPG Guideline document.

Thus, the ICA-BPPG Guideline underwent 4 primary draft revisions. This final draft is the completed version of the ICA-BPPG Guideline.

E. Possible Stake Holders’ Conflicts of Interest

A. Introduction

According to Linton & Peachy², “*Guidelines must emanate from a credible and acceptable source. Governments do not qualify on either ground.*” Additionally, “*The second group of non-medical organizations that might attempt to impose standards includes third-party payers, insurance groups, and, perhaps hospital administrative organizations*”.²

In an article published in JAMA investigating potential conflict of interest of authors of Clinical Practice Guidelines (CPG’s), Chaudrey³ stated, “*if individual authors have relationships that pose a potential conflict of interest, readers of these CPG’s may wish to know about them to evaluate the merit of those guidelines.*”³ The author continues, “*Financial conflicts of interest for authors of CPGs are of particular importance since they may not only influence the specific practice of these authors but also those of the physicians following the recommendations contained within the guidelines.*”³

Eccles is quoted as stating, “*There are good theoretical reasons to believe that individuals’ biases are better balanced in multidisciplinary groups, and that such balance will produce more valid guidelines.*”⁴ A, “Multidisciplinary”, composition for a guideline of the nature of the current ICA-BPPG Guidelines (for the chiropractic profession) does not imply the inclusion of medical and/or osteopathic physicians. Rather, we believe that a more representative group of chiropractic researchers and clinicians, whose primary focus was/is clinical care of patient conditions as chiropractic clinicians either currently or in the past, is most appropriate.

Our Committee was multidisciplinary as it was composed of chiropractors, who practice in both Canada and the USA, who practice a variety of different Techniques, and who have a variety of practice types including wellness, structural rehabilitation, functional rehabilitation, personal injury, insurance based practices, and cash practices.

In discussing the biases and conflicts in evidence based medicine (EBM) and CGP development, Arnett stated:

“*...the most important problem with EBM is that of its ethics. EBM is not a physician driven agenda. It has bypassed the clinicians (those physicians with clinical training, experience, and an extensive knowledge of health and disease)*”

*in favor of an alliance of managers and their statistical technocrats, who are empowered to define 'best practices'," and "Their paychecks depend on churning out these definitions. These non-clinicians thus have acquired substantive influence over millions of clinical consultations without sharing any of the responsibility for the clinical consequences."*⁵

Based upon this information, the 7 ICA-BPPG principal investigators sought to develop practice guidelines for the Chiropractic profession that were driven by chiropractic clinicians' understanding of the individual patient needs on one hand and an extensive knowledge of the scientific literature relating to a variety of general health problems, spinal health, and pain disorders on the other. Input from 3rd party payers, government agencies, managed care organizations and the like were not sought and not considered relevant. Involvement of chiropractic independent medical evaluators (IME's) for insurance providers was a factor for exclusion on ICA-BPPG. Involvement from chiropractic technique leaders and individuals who teach continuing education conferences for licensure renewal in the chiropractic profession were not considered to be conflicts of interest because every clinical Chiropractic study ever published was sought for review.

None of the ICA-BPPG Committee members received funding of any kind for their involvement in the ICA-BPPG Guidelines. However, because Chaudry stated, "*Unfortunately, bias may occur both consciously and subconsciously, and therefore, its influence may go unrecognized*"³; it is necessary to list and describe all possible conflicts of interest of all ICA-BPPG Committee members.

Table 2A.
Possible Conflicts of Interest for
Authors and Executive Committee for Best Practices & Practice Guidelines

Name	Active Clinical Practice: Years, Active or Inactive	IME: Yes/No	Chiropractic Research Investigator: # of Peer-Reviewed Publications	Chiropractic Technique Leader and/or CE Instructor	Reviewer for any Peer-Reviewed Journal	Any Previous Guideline Panel Member
Authors and Executive Committee for Best Practices & Practice Guidelines						
Betz, J	6 Active	No	6	No	No	PCCRP
Clum, G						
Colloca, C	12 Active	No	46	Neuromechanical System	4	No
DeGeorge, D	21 Active	No	5	CBP Technique	No	No
Ferrantelli, J	8 Active	No	4	No	No	PCCRP
Haas, J	5 Active	No	16	No	0	PCCRP
Harrison, DE	11, Active	No	88	CBP Technique	6	PCCRP
Harrison, DD	14 Active, 14 Inactive	No	73	CBP Technique	1	PCCRP
Henderson, R						
Huntington E	7 Active	No	0	No	0	No
Molyneax, E						
Murphy, D						
Siskin, L	10 Active	No	1	No	0	PCCRP
Van Egmond, C						
Wiegand, A	1 Active	No	2	No	0	No

F. Budget**1. Committee members Costs**

- A. Airplane tickets
- B. Airport parking/transportation
- C. Hotel
- D. Meals
- E. Computer data base

Table 3
Expenses/Budget
ICA Members paid their own way and were not reimbursed

Meeting Dates	Motel	Food	Airplane Flights	Car Rentals	Copying/Scanning	Data Base
December 14-17, 2006						
January 11-14, 2007						
March 14-18, 2007						
June 14-17, 2007						
August 2-5, 2007						
November 16-18, 2007						
December 7-9, 2007						
January 17-20, 2008						

2. Library Searches

- A. Dr. Nicole Knapp
 - 1. Airfare to-from Davenport
 - 2. Room & board in Davenport for 2.5 months
 - 3. Salary
- B. Student help paid per hour
- C. Library costs of locating articles via library searches
- D. Xeroxing of all articles
- E. UPS/US postage for sending boxes of Xeroxed documents to ICA-BPPG Chair

H. Acknowledgments**I. References**

1. AGREE Collaboration. Agree Instrument: Appraisal of Guidelines for Research and Evaluation. London: St. George's Hospital Medical School; 2001: 1-22.: <http://www.agreecollaboration.org>.
2. Linton AL, Peachey DK. Guidelines for medical practice: 1. The reasons why. Can Med Assoc J 1990; 143(6):485-490.
3. Choudhry NK, Stelfox HT, Detsky AS. Relationships between authors of clinical practice guidelines and the pharmaceutical industry. JAMA. 20287(5):612-7.
4. Eccles M, Mason J. How to develop cost conscious guidelines. Health Tech Assess 2001;5(16):1-83.
5. Jerome Arnett Jr., M.D. Individualized Health Care in Jeopardy *Thursday, June 29, 2006*. <http://www.newsmax.com/archives/articles/2006/6/28/160841.shtml> Date Accessed, July 9, 2006