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Current efforts in chiropractic quality assurance and standards of care†

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The chiropractic profession has recently begun to proactively address the problems identified by the health care industry. Prompted by rising health care costs, careful analysis revealed that the major culprit was the variance in the delivery of health care. Concerned with outside regulation, health professionals, both in the USA and Canada, are generating clinical guidelines that will serve as templates for the development of standards of care. More specifically, the chiropractic profession is identifying and establishing standards of practice. This in part is due to published data illustrating the variations in treatment frequencies between geographic locations. Acknowledging these variations will enable the identification of solutions. The solutions will be formulated from a growing knowledge base comprised of printed literature and the opinions of recognized experts through consensus panels. The result is the creation of practice standards and guidelines that will serve to answer concerns of accountability and ultimately to protect the public. The process from the creation to the implementation of the guidelines is necessarily detailed; but can be enhanced by the use of clinical algorithms. Clinical algorithms describe a step wise procedure to patient management that may impact upon patient care, health care costs and outcome measures. As chiropractic achieves greater visibility, it will be expected to perform at the same level of accountability as the other health provider groups. Each chiropractor should understand the process and its limitations, and be prepared to contribute in the development, distribution and implementation of reasonable practice guidelines.
(JCCA 1991; 35(4):206–214)

KEY WORDS: chiropractic, manipulation, standards.

Les chiropraticiens, en tant que corps professionnel, ont récemment commencé à se pencher activement sur les problèmes identifiés par le secteur des soins de santé. Des études approfondies, entreprises à la suite de l'augmentation des coûts des services de santé, ont révélé que le principal problème provient des différences existant dans la façon de prodiguer les soins de santé. Préoccupés par des règlements extérieurs, les professionnels de la santé, tant aux É.-U. qu'au Canada, créent des codes de déontologie médicale qui serviront de gabarit pour la mise au point de normes en matière de soins. Les chiropraticiens s'attachent, plus précisément, à identifier et à établir des normes de pratique. Ceci est, en partie, le résultat de données publiées illustrant les différences existant dans la périodicité des traitements suivant les lieux géographiques. Reconnaître ces différences permettra d'identifier des solutions. Les solutions seront formulées à partir d'une base de connaissances de plus en plus importante, composée d'imprimés et, par le biais de comités, d'opinions de spécialistes réputés. Le résultat est la création de normes de pratique et d'un code déontologique qui aideront à répondre aux questions de responsabilité et surtout de protection du public. Le processus, de la création à la mise en application des normes et du code, doit nécessairement être détaillé; mais, il peut être amélioré par l'utilisation d'algorithmes cliniques. Les algorithmes cliniques décrivent un enchaînement d'actions relatif à la gestion des malades, pouvant influer sur les soins, leurs coûts et les mesures qui en résultent. Si la chiropratique acquiert plus de visibilité, on s'attendra à ce qu'elle fonctionne au même niveau de responsabilité que les autres groupes de professionnels de la santé. Chaque chiropraticien doit comprendre le processus et ses limites et être prêt à contribuer à la mise au point, à la propagation et à la mise en application d'un code déontologique raisonnable.
(JCCA 1991; 35(4):206–214)

MOTS-CLÉS : chiropratique, manipulation, normes.

Introduction

After over two decades of philosophical and organizational struggle, the North American health care industry is more proactive in its implementation of measures to assure the delivery and purchase of quality care and to control the run-away increases in health care costs. Physician organizations in Canada and the United States have endeavored to assure accountability in the delivery of efficient and effective care. Their efforts have led to the identification of authoritative committees that will

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oversee the development of practice standards and guidelines, and define the process used in guideline development.

The chiropractic profession also has symptoms of such a struggle. Until recently, the profession as a whole had not properly acknowledged the problems identified by the health care industry, such as variations in chiropractic practice. It also had not contemplated solutions such as the identification of suitable structures and processes in the development of chiropractic practice standards and guidelines. But now chiropractic professionals are witnessing a movement towards enhanced accountability through the self-assessment of technology and procedures, and the formal definition of chiropractic practice through such common and accepted protocols as literature review, expert panels and consensus methods. This effort must mature to include widespread involvement by chiropractic practitioners as well as the clinical and research faculty of the colleges.

Contemporary quality assurance measures for health care are already being implemented for chiropractic services. The profession now has the opportunity to be more proactive in defining this process as it relates to chiropractic practice.

Accountability in the health care professions

Many simply blame it on rising health care costs. "*It*" is the enhanced professional accountability that has become more prominent in recent chiropractic meetings and publications. But with more careful analysis, we see that the increased cost of health care is frequently from variations in the delivery of health care. Thus accountability is being manifested by the implementation of quality assurance measures and standards of care designed to reduce such variations in practice. There is no question that reimbursement managers have orchestrated this movement in response to the uncontrolled escalation of health care costs over the past ten years, with *no* significant improvement in general health. More and more physician groups (including specialty societies) are now establishing practice parameters, partly to prevent the purchasers of health care fom establishing them, in their own way. Physician groups are taking the proactive role to be involved in this process.

Past attempts at physician monitoring and cost controls have done little in holding down the rapid rise of costs associated with hospitalization, physician services (including chiropractic services), ancillary services, and the purchase of durable goods. Many of the increased costs may be due to technological advancement and defensive medicine, but a significant portion of the increase in costs is attributable to the purchase of inappropriate care.[1] Thus, there is agreement for the need to proceed with development of standards and guidelines.

In the United States, the federal government recently established a federal agency that will have the responsibility to oversee the development of health care practice guidelines, investigate appropriateness issues and to regularly evaluate medical technology. The Agency for Health Care Policy and Research (AHCPR) was the result of the Omnibus Reconciliation Act (OBRA) of 1989 and has responsibility in this area of health care accountability.[2] This agency is currently funding expert panels for the development of standards of care, such as the recently disclosed panel on low back pain.[3] It also funds outcomes assessment projects with the most visible one being the Back Pain Outcome Assessment Team at the University of Washington. As an aside, it is projected that this team will be investigating chiropractic manipulation through a randomized clinical trial over the next few years. Currently, there are two chiropractors that serve on the technical advisory committee of this project.

Physician groups throughout the United States have combined their efforts to create attributes of practice guideline development. Utilizing the resources of AHCPR and the National Institute of Medicine, they formulated definitions and attributes for guideline development.[4] The attributes now serve as a template for standards of care development for the various medical specialties.[5]

In Canada, the provincial medical associations are moving toward the generation of clinical guidelines for optimal patterns of practice. In one such effort, the Ontario Medical Association made recommendations on how such guidelines should be produced. These Canadian physicians agreed that the coordinating body overseeing the development of such parameters should be independent of government and other interested parties.[6]

Chiropractic identifies need to be accountable

As more and more published evidence of variation in chiropractic practice becomes available (see Table 1), there will be more interest in what drives such variation. For this discussion, it is important to understand that variation in practice may be characterized as the delivery of improper care, including its overuse, and underuse. Chassin[1] offers definitions for these sources of variation:

1 **Improper care** is poor performance of physicians including the areas of technical skills or interpersonal relations. This care would have been appropriate if it had been properly performed;
2 **Overuse** refers to the [medically] incorrect decision to subject a patient to specific diagnostic or therapeutic interventions when other tests or procedures or no intervention would be more [medically] appropriate. There is substantial evidence that overuse of health services exists and it poses a risk to patients;
3 **Underuse** refers to the failure to employ [medically] appropriate services. This is believed to be considerable, but is harder to detect because those services would be events that should have occurred but did not. Underuse also poses risks to patients.

In our profession, it may be easy to generalize and blame the creation of "false standards" on entities such as chiropractic management enterprises, insurance companies, philosophies of practice, and even attorneys, but future study needs to focus on physician attitudes and behaviors. Begging for investigation are

questions such as: "How does peer opinion and dependence on tradition by education contribute to practice variation?" and, "To what degree do the financial reimbursement strategies govern chiropractic necessity?" Answers to these questions may offer a better analysis of practice trends that are influenced by non-clinical factors. It is incumbent upon the profession to consider these factors in the development of and subsequent compliance with standards of practice.

Mostly due to the pressure exerted by health care purchasers and governmental agencies, the chiropractic profession has identified the need to proceed toward developing reasonable practice guidelines and standards. Standards of care documents have already been generated in Ohio, Washington, Arizona, Connecticut, and California. Similar efforts are also underway in Oregon, Minnesota, Manitoba and Quebec. Unfortunately all of these projects are occurring independently and without any central control assuring consistency of format, design and content. Thus, if we were to compare them, we will likely see disparity in the outcomes, especially in the recommended treatment guidelines. As a consequence of the above efforts, the chiropractic profession has identified that there is a need for this process of accountability to proceed.

Evidence of variation in chiropractic practice

Variation in chiropractic practice is becoming more evident especially with access to larger data bases of practice statistics. The classic model of such analysis is offered by Shekelle and Brook[7] noting as much as seven-fold differences of visit frequency between geographic locations. Other recent studies (see Table 1) have shown evidence of variation, including experience in workers compensation claims. In the Washington study, utilization and variation to practice significantly decreased when the profession knew it was being observed, a classic example of the "Hawthorne Effect".[8] The results of this investigation suggest that the observed changes in practice measures (i.e.: visits per claim and costs per claim) are indeed behavioral, having nothing to do with education of the providers or the use of accepted guidelines. In the Utah experience cited by Jarvis and Phillips,[9] there was significant differences in practice characteristics amongst those chiropractors practicing under the aegis of a managed care group utilizing preauthorization utilization review compared to non-managed practitioners. These results will undoubtedly prompt further investigation of other data bases including workers compensation, personal injury claims, and including employee health care plans.

Table 1
EVIDENCE OF VARIATION IN CHIROPRACTIC PRACTICE

Von Kuster (1980)	Foundation for Advancement of Chiropractic Tenets and Science
Shekelle and Brook (1991)	RAND Health Insurance Experiment
Jarvis and Phillips (1991)	Utah Workers' Compensation
Hansen (1991)	Washington State Workers' Compensation

Source: Hansen DT, Adams AH et al. Proposal for Establishing Structure and Process in the Development of Implicit Chiropractic Standards of Care and Practice Guidelines. Accepted for publication. J Manipulative and Physiological Ther. June 1991. Used with permission.

Planning the solutions

If the profession acknowledges the variations in the type and frequency of care are found in chiropractic practice, then it can move forward to identify reasonable and equitable solutions. For this to occur it will be extremely important for the profession to be well represented, utilizing recognized experts that can communicate well on behalf of the profession. The critical first step is to accept basic definitions pertinent to this process.

Definitions of what comprises standards of practice and utilization parameters have been offered by AHCPR and could be adopted to serve as a foundation for this effort.[2] These include:

Practice guidelines – systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical conditions.

Standards of quality – authoritative statements of (1) minimal levels of acceptable performance or results, or (2) excellent levels of performance or results, or (3) the range of acceptable performance.

The second step is to identify the components necessary to formulate the guidelines. In the spring of 1991, the Consortium for Chiropractic Research (CCR) issued a policy statement called *Attributes of Chiropractic Practice Guidelines* (see Appendix). Based upon published reports on developing standards of care for the health professions it addressed the necessary components in the development and evaluation of chiropractic practice guidelines. This policy statement is a good tool for any organization to use in evaluating the process of chiropractic guideline development and ensuring its accountability. Use of this statement allows for high levels of accountability thus guarding against arbitrary, capricious or otherwise spurious efforts. It clearly defines who should develop chiropractic standards and how they should be developed. Broad professional support and compliance to these attributes places our profession at the forefront of accountability and legitimacy as a learned health care profession. It also assures continuity in a process that is inherently dynamic and sensitive to changes in knowledge, technology and opinion.

Current chiropractic efforts in standards of care

The most methodical effort currently in standards of care development is that sponsored by the California Chiropractic Foundation, in conjunction with the Consortium for Chiropractic Re-

search.[10] This effort began over four years ago and has evolved into the investigation of the three broad categories found in Table 2. For the most part, this early work was limited to the low back, most due to the amount of information available and the impact of the chiropractic profession on low back syndromes.

Another effort, recently spearheaded by the Congress of State Chiropractic Associations with support of the American Chiropractic Association, International Chiropractors Association, Canadian Chiropractic Association and other organizations, will take the form of a chiropractic commission organized to develop *Guidelines for Chiropractic Quality Assurance and Standards of Practice*. This effort will culminate in a four day conference in California in January, 1992 and will define quality chiropractic care in the areas of patient evaluation, case management and outcomes assessment. The conference will establish guidelines in the fifteen areas outlined in Table 3. Each of these fifteen sections will serve as a chapter in a published document made available to every chiropractor in North America.

As the chiropractic profession proceeds into this arena of guideline development, there will be increasing reliance on the knowledge base contained in refereed literature and the opinions of the experts. A process of technology and procedure assessment for chiropractic methods has been launched by the Consortium for Chiropractic Research and the Council on Technic (ACA). The first *Consensus Conference on the Validation of Chiropractic Methods* held in Seattle, Washington last year established direction for the co-sponsors to proceed in the development of assessment sequences to investigate the current state of chiropractic technology and related procedures. In the next phase of this process, the second *Consensus Conference* will explore eight chiropractic procedures using literature review and expert panel protocol.[11] The outcome of these panels will help to contribute to that knowledge base.

The knowledge base then is comprised of what is known through the printed literature and opinions of recognized experts through consensus panels. This pool is then accessible in the creation of practice standards and guidelines which will serve to answer concerns of accountability and ultimately to the protection of the public.

Table 2
CALIFORNIA STANDARDS OF CARE PROJECT

I. UNIVERSE TO BE STUDIED
- A. Terminology
- B. Literature Review of Chiropractic Practice Characteristics
- C. Global Utilization Study of the Field
  1. Record Audit
- D. Third Party Data
  1. RAND Health Insurance Experiment
  2. Workers' Compensation
  3. Private Insurance

II. UTILITY STUDIES
- A. Review of Literature on Common Procedures
  1. Analytical (diagnostic)
  2. Therapeutic (treatment techniques)
  3. Management of Conditions
- B. Meta-analysis: Randomized Controlled Trials of of Spinal Manipulation for Low Back Pain
- C. Hearings and Consensus Conferences on Investigational Procedures

III. CLINICAL PRACTICE
- A. UCLA/RAND Consensus Process for Appropriateness of Care
- B. Practice Survey using written simulations to determine the presence and extent of standards of care

Source: Consortium for Chiropractic Research

Table 3
GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE AND STANDARDS OF PRACTICE

INITIAL PATIENT EVALUATION
1. History and physical examination
2. X-ray and other imaging
3. Instrumentation
4. Clinical laboratory
5. Initial documentation and patient consents

CASE MANAGEMENT
6. Clinical impression
7. Modes of care
8. Frequency of care
9. Reassessment
10. Record keeping

OUTCOMES
11. Outcome assessment
12. Collaborative care
13. Management of complications
14. Maintenance, prevention and supportive care
15. Professional development

Source: The Chiropractic Report

This effort of enhancing the accountability of chiropractic to the purchasing public must occur. The process does cost money and many thousands of hours of dedicated work. Fortunately for the chiropractic profession, there are several groups that have come forward with financial assistance including the Canadian Chiropractic Association and the Chiropractic Foundation for Spinal Research in Canada. (See Table 4) However, to date, there have been *no* federal monies expended for this type of critical assessment of chiropractic.

Developing chiropractic standards of care

At the 1991 World Chiropractic Congress, a proposed *structure* and *process* in the development, disbursement and implementation of chiropractic guidelines was presented.[12] In this context "process" refers to factors relative to the delivery or administration of a service. The development of guidelines for chiropractic practice should include identifying and ranking practice issues and topics to be evaluated, established minimum criteria for literature searches, defining consensus methods to be employed, identifying the methods for distribution and implementation of policies, and measurement of compliance. All of these process sequences have been used in the health professions and the results are found in the health services literature. Some chiropractic colleges are already implementing these processes into their curriculum.[13]

A helpful method used for the process of guideline development is the incorporation of "clinical algorithms" in clinical decision-making sequences. Treatment guidelines in the future may take the form of algorithms as they set forth a step-wise procedure for making decisions about the diagnosis and treatment of clinical problems confronting the physician. Since algorithms are clear and concise and can be represented graphically, they provide an excellent basis for communicating and representing specifications of optimal clinical care. Gottlieb et al.[13] of the Harvard Community Health Plan of Boston state that "clinical algorithms may both improve quality and decrease costs by guiding clinicians toward more standardized, clinically optimal, cost effective strategies and by facilitating more valid measurement of clinical process and outcomes."

Development of clinical algorithms for specific health care settings should involve the clinicians for whom the algorithms are designed. The guidelines would then be based both on literature survey and the clinical experience or perspectives of the many clinical specialties often involved in managing a patient with a given problem. Because the clinicians using the guidelines are their developers, the guidelines are uniquely adapted to the clinical setting for which they are designed. Thus an algorithm for uncomplicated low back pain in a teaching clinic of a chiropractic college may look different from one found in a staff-model HMO that has an employee chiropractor.

To this point there have not been many clinical algorithms published in the refereed chiropractic literature (Figure 1). But because of the sudden rush for clinical guidelines development, it is expected that we will soon witness an expanded effort to represent such guidelines graphically with algorithms. It behooves the clinician to learn how to read, critique and use clinical algorithms. In the near future, more and more clinicians will be called upon to participate in panels assembled to critique clinical algorithms for the many different conditions confronting them in practice.

In this new age of artificial intelligence, algorithmic sequences are well suited for implementation into computer programs for health care administration. Many private firms specializing in quality assurance and utilization review already exist and use algorithms in the management of their data bases for pre-certification of care, concurrent utilization review and claims administration. This technology is already in use with chiropractic claims activity.

Table 4
CHIROPRACTIC STANDARDS OF CARE FUNDING ORGANIZATIONS

American Chiropractic Association
Association of Chiropractic Colleges
California Chiropractic Foundation
Canadian Chiropractic Association
Chiropractic Foundation for Spinal Research
Congress of State Chiropractic Associations
Federation of Chiropractic Licensing Boards
Foundation for Chiropractic Education and Research
International Chiropractors Association
Motion Palpation Institute
National Chiropractic Mutual Insurance Company
National Institute for Chiropractic Research

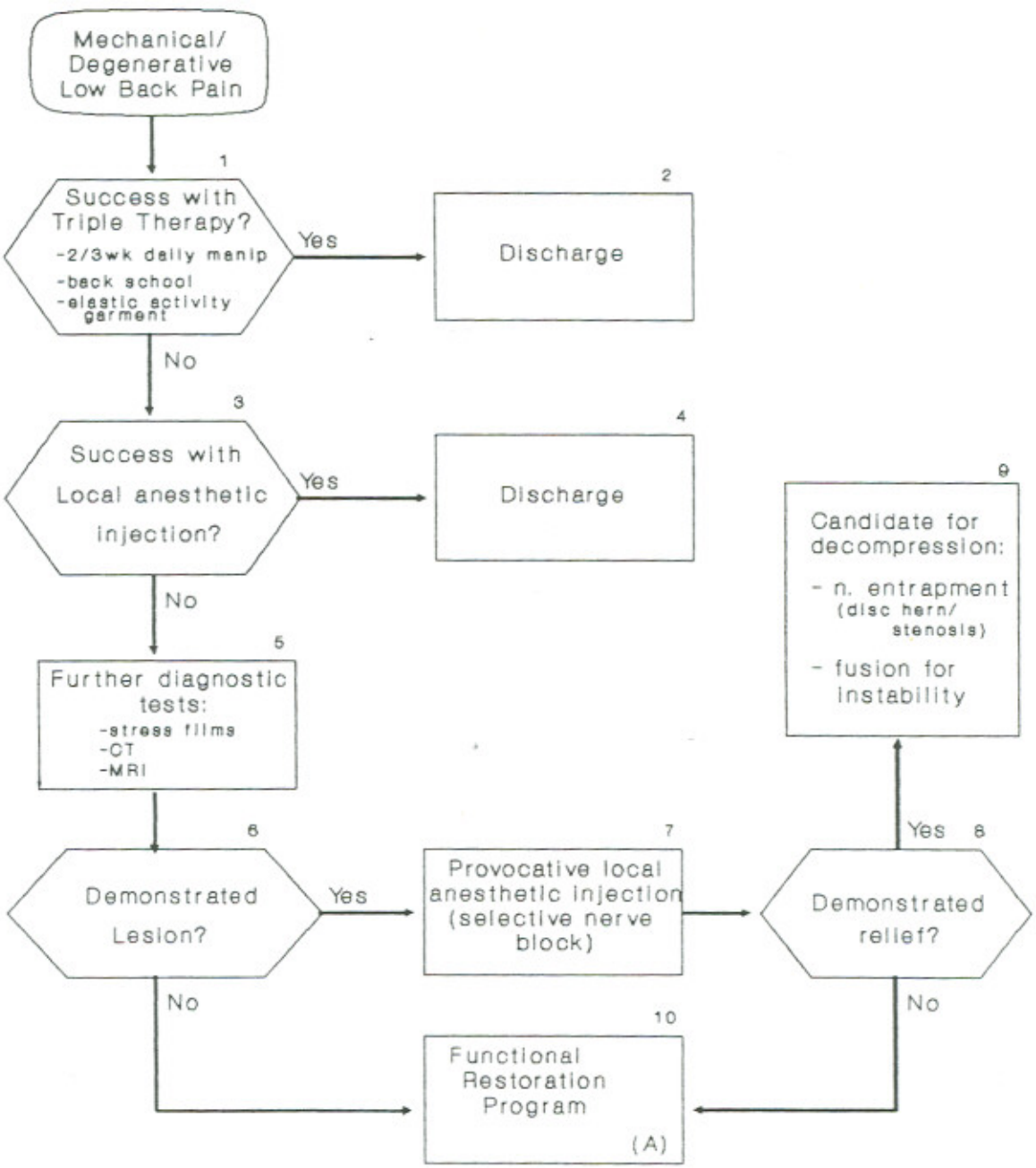
Source: Hansen DT, Adams AH et al. Proposal for Establishing Structure and Process in the Development of Implicit Chiropractic Standards of Care and Practice Guidelines. Accepted for publication. J Manipulative and Physiological Ther. June 1991. Used with permission.

Conclusion

For decades, the chiropractic profession has been fighting, biting and scratching to gain recognition with governments and private sector health care purchasers. As we achieve more visibility and greater public demand, it is expected that we perform at the same level of accountability within the health delivery system as the other health provider groups. In the USA and Canada, the medical profession and related specialties are carving a path of what that accountability should look like and they are actively involved in the process. Active participation is an absolute necessity to assure that the guidelines developed are fair, flexible, scientific, open for public debate and avoid purely fiscal concerns.

Each and every Doctor of Chiropractic in North America has a vested interest in this process and should be prepared to contribute in some way. It is important for each of us to have an

Algorithm for Mechanical/Degenerative LBP



Adapted from Aker, Thiel, Kirkaldy-Willis, 1990

APPENDIX A

Consortium for Chiropractic Research
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ATTRIBUTES OF CHIROPRACTIC PRACTICE GUIDELINES

The following attributes of practice guidelines provide guidance for the development of new guidelines as well as the evaluation of existing ones.

ATTRIBUTE 1

CHIROPRACTIC STANDARDS AND GUIDELINES SHOULD BE DEVELOPED BY OR IN CONJUNCTION WITH CHIROPRACTIC ORGANIZATIONS.

Organizations and individuals participating in the development of chiropractic standards and guidelines should be characterized by the following:

- scientific and clinical expertise in the content areas of the guidelines;
- broad-based representation of physicians likely to be affected by the guidelines; and
- process capabilities for facilitating panels, providing evidence and viewpoints to panels and reviewing draft guidelines.

Relevant chiropractic organizations should have the opportunity to review and comment on practice guidelines during their development.

ATTRIBUTE 2

RELIABLE METHODOLOGIES THAT INTEGRATE RELEVANT RESEARCH AND APPROPRIATE CLINICAL EXPERTISE SHOULD BE USED TO DEVELOP CHIROPRACTIC STANDARDS AND GUIDELINES.

Documentation – The procedures followed in developing guidelines, the participants involved, the evidence used, the assumptions and rationale accepted, and the analytic methods must be documented meticulously and described.

Documentation of review of relevant literature and other appropriate research should be available:

- description of the process for reviewing the scientific literature and appropriate research is noted or available on request, and
- description of the evidence reviewed is included or available upon request.

Expert clinical judgement and review should be provided, including use of appropriate consensus methods, the methodology of which is evidenced by:

- description of clinical review process and credentials of consensus facilitator is documented and available upon request; and
- special chiropractic procedure interests, specialty affiliations and other credentials of groups or individuals providing clinical expertise and review is documented and available upon request.

Findings from the review of relevant research findings and clinical judgement, including substantative minority reports should be incorporated into practice standards and guidelines and evidenced by:

- statements regarding the basis (e.g., scientific literature, clinical judgement) for the practice standards or guidelines are noted or available upon request.

ATTRIBUTE 3

PRACTICE STANDARDS AND GUIDELINES SHOULD BE AS COMPREHENSIVE AS POSSIBLE.

Validity – Practice guidelines are valid if, when followed, they lead to better health outcome. A prospective assessment of validity will consider the substance and quality of the evidence cited, the means used to evaluate the evidence, and the relationship between the evidence and recommendations.

Reliability/Reproducibility – Practice guidelines are reproducible and reliable if (1) given the same evidence and methods for guideline development, another set of experts produces essentially the same statements, and (2) given the same clinical circumstances, the guidelines are interpreted and applied consistently by practitioners (or other appropriate health care providers).

Clinical Applicability – Practice guidelines should be as inclusive of appropriately defined patient populations as evidence and expert judgement permit, and they should explicitly state the population(s) to which they apply.

Clinical Flexibility – Practice guidelines must identify the specifically known or generally expected exceptions to what is recommended.

Clarity – Practice guidelines must use unambiguous language, define terms clearly, and use a logical and easy-to-follow mode of presentation.

Guidelines should consist of statements noting indications for appropriate management in specific clinical situations.

Guidelines should be designed to assist clinicians by providing a framework for the evaluation and treatment of the more common patient problems confronting the chiropractor. They are not intended to replace either the clinician's clinical judgement or to establish a protocol for all patients with a particular condition. It should be understood that some patients will not fit the clinical conditions contemplated by such guidelines and that a guideline will rarely establish the only appropriate approach to the problem.

ATTRIBUTE 4

PRACTICE STANDARDS AND GUIDELINES SHOULD BE BASED ON CURRENT INFORMATION.

Scheduled Review – Practice guidelines must include statements about when they should be reviewed to determine whether revisions are warranted, given new clinical evidence or professional consensus (or lack of it).

There should be provisions for periodic reviews and revisions, when appropriate, of the practice guidelines as evidenced by:

- date of publication, or completion, is specified, and
- initial writing, review, or revision has occurred within the last three years.

ATTRIBUTE 5

PRACTICE STANDARDS AND GUIDELINES SHOULD BE WIDELY DISSEMINATED.

There should be plans for wide distribution of the guidelines to the chiropractic practice community, evidenced by:

- source where guidelines will be available are noted and published,
- mechanism by which guidelines will be distributed are identified.

Organizations of health care practitioners, health care consumers, peer reviewers, accrediting bodies, chiropractic academic centers, chiropractic educators, researchers, payers, and other appropriate groups will be encouraged to disseminate the guidelines to their members and constituents.

Successful implementation will depend on many factors in addition to the quality and credibility of the guidelines and their design process. Among those factors are:

- the funding for dissemination and other implementation activities;
- the incentives and supports for the guidelines to be used by practitioners, health plans, and others;
- the accessibility, scope, accuracy, and timeliness of a variety of multiple parties to plan and execute the various steps needed to implement guidelines.

Adopted March 16, 1991

understanding of the process and its inherent limitations. It will require more doctors to read the refereed literature, contribute to its pages either by publication of case studies or participation in research projects, or even by expressing opinions in letters to the editor. When there becomes opportunity to participate in public debate on these issues, we should not hesitate to offer opinion. But we also should be ready to *act* . . . make ourselves available to participate in the development, distribution and implementation of reasonable practice guidelines.

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