

**Chapter Outline**

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## I. OVERVIEW

Reassessment refers to patient evaluations performed after the initiation of patient care. Reassessment is essential for monitoring the patient's progress and is also termed "outcomes assessment." Clinical research addresses the development and application of reassessment instruments and procedures. Appropriate application of these to clinical practice is of great importance.

The primary reason for reassessment is to evaluate the patient's clinical state. From this and a knowledge of prior condition, rate of progress and specific procedures utilized to manage the patient's condition, more informed decisions can be made regarding the appropriateness of care, efficiency of care rendered, need for continued care, and the need to modify care. A number of questions have been raised with regard to reassessment such as: Why should patients be reassessed, what specifically should be reassessed, when should reassessment be performed, and how should reassessment be conducted? In considering these topics, it is important to keep in mind the distinctive qualities of chiropractic as a manual healing art.

Examinations that are conducted during the entrance evaluation of the patient for chiropractic care give the chiropractor a starting point from which to monitor the patient's progress. There are many different kinds of examination procedures used to give indications of the presence of vertebral subluxation and other malpositioned articulations and structures. With information supplied in the case history and patient observation processes, the chiropractor will decide which examinations will furnish the best data.

Different patterns and types of reassessments can be done during care. It is inherent in chiropractic care that the patient be regularly reassessed as to their need for chiropractic adjustment.

The dynamic nature of the recuperative process requires that periodic reassessment be performed to track the patient's progress and determine the need for continued care or the need to modify the management program. Follow-up reassessment is performed at the end of the management program or when the patient has attained maximal improvement. Such an assessment is often performed to ascertain the degree of residual deficit, such as disability ratings, impairment ratings or the degree of recovery.

## II. LIST OF SUBTOPICS

- A. Reassessments -- General Principles
- B. Interactive Reassessment
- C. Periodic Assessment
- D. Discussion of Outside Reviews by Other Professionals

## III. LITERATURE REVIEW

In the absence of definitive data based on large-scale, longitudinal studies, the frequency of reassessment is left implicitly to the judgement of the attending doctor. Currently, justification for any particular pattern of reassessment must be culled from the clinical research literature and expert opinion. A representative selection of the literature is referenced at the end of this chapter.

In clinical practice there is typically a single assessment in the initial patient evaluation, but it is not uncommon for several consecutive assessments to be conducted to create a baseline for the patient's progress. The approach taken may depend upon the patient's condition. For example, a patient with severe, acute pain due to an apparent lumbar disc herniation will have little tolerance for multiple session evaluations to establish a baseline for management. By contrast, the establishment of a baseline for juvenile scoliosis patients typically requires evaluations over a period of several

months.

Patients are reassessed for a number of reasons. Primary among them is the ongoing need for the practitioner to determine the necessity and appropriateness of further care. Reassessment gives the practitioner an opportunity to assess the effectiveness or success of the chosen care plan by providing a monitor of patient progress, either improvement or deterioration. It is important to determine whether improvement is occurring at an appropriate rate. If not, appropriate changes in the care plan can be made, including possible referral.

A reassessment is often performed to satisfy the requirements of third-party payers. Their concerns are often the justification for continued care, determination of patient progress, and determination of disability rating.

As a general rule, reassessment will focus on those areas in which positive findings were obtained during the initial clinical evaluations. Exceptions to this occur when additional signs or symptoms develop during the course of care which mandate re-evaluation of previously negative tests or the use of procedures not previously employed. When the natural history of a condition is known, reassessment can provide valuable insight into the effectiveness of the care program in altering its course.

It is unreasonable to adopt the approach that every known test is performed on the initial examination and subsequently repeated with each reassessment. Good clinical judgement combined with careful observation will direct the practitioner to those areas and procedures which will provide the most valuable information. The clinical tests used during reassessment will depend on the nature of the condition being evaluated.

"Interactive assessment" includes procedures which direct care for that patient visit. These typically include procedures which provide indications for chiropractic care, such as palpation, instrumentation, leg check and other methods of spinal motion assessment.

Periodic reassessment includes: 1) repetition of actions or clinical procedures which upon prior examination provided information about the chief complaint and which led to the clinical impression. Examples include range of motion, tenderness and positive pain provocation signs; 2) repetition of tests wherein abnormalities were detected on initial examination (e.g., deep tendon reflexes); 3) new procedures not previously performed but indicated by the patient's clinical condition; 4) special studies (e.g., C.T. scan) which may impact the course of care when there has been a failure to improve or deterioration in the patient's condition.

Spinal radiography is used widely as a chiropractic diagnostic and clinical reassessment tool. Existing criteria and practice have evolved empirically from clinical experience and convention. However, such procedures are widely used. As in all health care, if we depend entirely upon scientific method to determine the inclusion or exclusion of evaluation procedures, we would be left with a paucity of procedures with which to arrive at a working clinical impression.

The way in which reassessments are made needs considerable clarification. Interactive procedures should be simple and allow for assessment in an ongoing practice. Analog pain scales provide a tool for regular pain assessment, whereas pain questionnaires are more cumbersome and difficult to administer on an ongoing basis. Periodic evaluations may have more formal structure and detail. They may include more extensive questionnaires regarding pain, patient satisfaction and activities of daily living, functional disability assessment, and more extensive physical examination procedures. The evaluative procedures selected will depend upon the nature and role of reassessment.

Frequency of periodic reassessment is determined by several factors such as the severity or

urgency of the condition or the likelihood of progression and degeneration. Scoliosis is an excellent example of a condition in which the frequency of reassessment varies with the severity and location of the condition, the age of the patient and history of prior progression. Truly life-threatening conditions requiring continuous monitoring, or even daily monitoring, are at times found in chiropractic practice. Severe acute conditions should be assessed frequently. A patient's need for reassessment may also change during the course of care, depending upon progress. If the patient's condition demonstrates marked improvement, then reassessment should become less frequent. Conversely, if the patient deteriorates, reassessment should be performed as soon as possible to determine an appropriate course of action.

The practitioner's role in integrating information from diverse sources and prescribing or administering care can be assisted by reassessment information contributed by a variety of individuals.

Some aspects of reassessment may involve appropriately trained and qualified employees of the attending practitioner. Others may require the assistance of specialized facilities, such as advanced imaging centers. The chiropractic practitioner assumes the role of team captain, coordinating the efforts of a health care team in the evaluation, diagnosis and management of the patient.

#### IV. RECOMMENDATIONS

##### 1. Reassessment

In a chiropractic practice, the initial assessment is documented and recorded. The purpose of these findings is to give the chiropractor information concerning the presence and location of vertebral subluxation and other malpositioned articulations and structures, in the context of the patient's general health status.

The chiropractor must determine on a per/visit and periodic basis, how the patient's care is progressing, therefore, reassessment examinations are performed. This process provides quantitative and qualitative information about the patient's progress which is utilized to determine the frequency and duration of chiropractic care.

|        |                |                         |
|--------|----------------|-------------------------|
| 12.1.1 | <b>Rating:</b> | Positive recommendation |
|        | Strength:      | E, L                    |

##### B. Performing the Reassessment

As a general rule, reassessment examinations are made by performing those procedures appropriate to the current status of the patient relative to vertebral subluxation(s) and other malpositioned articulations and structures. The reassessment findings are then compared to the previous findings to determine the patient's progress.

|        |                |                                |
|--------|----------------|--------------------------------|
| 12.2.1 | <b>Rating:</b> | Strong positive recommendation |
|        | Strength:      | E, L                           |

Reassessments are an integral component of case management and should be made following an appropriate period of care.

|        |                |                                |
|--------|----------------|--------------------------------|
| 12.2.2 | <b>Rating:</b> | Strong positive recommendation |
|        | Evidence:      | E, L                           |

C. The necessity for and the content of reassessments are determined by the patient's response. Patients responding as expected might be reassessed later and with fewer tests; those not

responding or responding more slowly should be re-evaluated sooner and possible more thoroughly. A knowledge of the natural history of the condition greatly facilitates decisions concerning the timing of reassessment.

12.3.1           **Rating:**                           Strong positive recommendation  
                  **Evidence:**                       E, L

Appropriate reassessments shall be made as soon as possible if the patient demonstrates a marked worsening of clinical status.

12.3.2           **Rating:**                           Strong positive recommendation  
                  **Evidence:**                       E, L

Appropriate reassessment should be made if the patient begins to manifest clinical signs or symptoms in areas not previously evaluated.

12.3.3           **Rating:**                           Strong positive recommendation  
                  **Evidence:**                       E, L

Reassessment should be performed by persons appropriately trained and qualified in the specific procedures.

12.3.4           **Rating:**                           Strong positive recommendation  
                  **Evidence:**                       E, L

Reassessment should be performed, as closely as possible, in the same manner as the initial assessment.

12.3.5           **Rating:**                           Recommended  
                  **Evidence:**                       Class I, II, III

Reassessments performed solely to satisfy third party interests should be performed with due regard for all the recommendations presented in this chapter.

12.3.6           **Rating:**                           Recommended  
                  **Evidence:**                       Class I, II, III

Interactive reassessment should be performed during each patient encounter for the purpose of confirming or modifying a clinical impression.

D.   Interactive Reassessment

12.4.1           **Rating:**                           Strong positive recommendation  
                  **Evidence:**                       E, L

E.   Frequency of Reassessment

1.   Per-visit reassessment should include at least one analytical procedure previously used. A chosen testing procedure is performed each time the patient is in the chiropractor's office for chiropractic care. The reassessment provides information necessary to perform an adjustment on a per-visit basis.

12.5.1           **Rating:**                           Strong Positive Recommendation  
                  **Strength:**                       E, L

2. Partial reassessment involves duplication of two or more preceding positive analytical procedures. Partial reassessment may be done periodically.

12.5.2           **Rating:**                           Positive Recommendation  
                  **Strength:**                           E

3. Full reassessment involves duplication of three or more preceding positive analytical procedures. Any additional or complimentary analytical procedures can be performed based on the current clinical status. Full reassessment may be done every 6 to 12 weeks during Phase I care. Subsequent levels of care may allow longer periods between full reassessments. (Refer to Chapter 8).

12.5.3           **Rating:**                           Strong positive recommendation  
                  **Strength:**                           E, L

**Comment:** If a patient's presentation indicates very frequent chiropractic adjustments or chiropractic manipulations, he or she may require more frequent reassessment. As indications require less frequent adjustments/chiropractic manipulations, reassessments will be performed less frequently.

#### 4. Discussion of Outside Review by Other Professionals

It is widely accepted that abuses are occurring in the review process involving paper reviews and independent chiropractic evaluations. The solution, however, must be a legislative endeavor.

12.6.1           **Rating:**                           Strong positive recommendation  
                  **Strength:**                           E

## V. REFERENCES

Adams AH: Methodological considerations in the selection of outcome measures for chiropractic practice. *ICSM Proceedings*, April 1991.

Arnold L: *Chiropractic Procedures Examination*, Seminole, FL: Seminole Printing, Inc., 1978.

Banks RJ, LeBoeuf C, Webb MN: Recently graduated chiropractors in Australia, Part 3: interprofessional referrals. *J Aust Chiro Assoc* 1988; 18(1):14-16.

Beech R: The fundamentals of the short-leg syndrome. *Annals of the Swiss Chiropractic Association* 1965, 3: 7-36.

Bolton SP: When to x-ray? A case report. *J Aust Chiro Assoc* 1989; 19(1):2-4.

Brunarski D: Chiropractic biomechanical evaluations: validity in myofascial low back pain. *J of Manipulative and Physiological Therapeutics* 1982, 5(4): 155-60.

Burns K, Johnston P: *Health Assessment in Clinical Practice*, Englewood Cliffs, NJ: Prentice-Hall, Inc., 1980.

Burton AK: Sciatic syndromes; a preliminary report of a search for criteria for identification and assessment. *Brit Osteopathic J* 1983; 15:87-94.

Christensen K: *Clinical Chiropractic Orthopedics*, Dubuque, IA: Foot Levelers, Inc., 1984.

Cox JM: *Low-Back Pain*, Baltimore: Williams and Wilkins, 1987.

- Dailey E, Buehler M: Plain film assessment of spinal stenosis: method comparison with lumbar CT. *J of Manipulative and Physiological Therapeutics* 1989, 12: 192-9.
- Daniel M, Long C, Murphy W, Kores R, Hutcherson W: Therapists' and chronic pain patients' perceptions of treatment outcome. *J Nervous Mental Di* 1983; 171(12):729-733.
- Deboer K, Harmon R, Savoie S, Tuttle C: Inter and intra-examiner reliability of leg-length differential measurement: a preliminary study. *J of Manipulative and Physiological Therapeutics* June 1983, 6(2): 61-6.
- DeGiacoma F: *Chiropractic analysis through palpation*, Glenhead, NY: New York Chiropractic College, 1979.
- DeGowin EL, DeGowin RL: *Diagnostic Examination*, Macmillan Publishing Company, Inc., 1981.
- Donelson R, Grant W et al.: Pain response to repeated end-range sagittal spinal motion. *Spine* (Sup 1991); 16(65): 5206-5212.
- Drummond D, Ranallo F, Lonstein J, Brooks HL, Cameron J: Radiation hazards in scoliosis management. *Spine* 1983; 8(7):741-748.
- Evans JH, Kagan A: The development of a functional rating scale to measure the treatment outcome of chronic spinal patients. *Spine* 1986; 11(3):277-281.
- Gatterman M: *Chiropractic Management of Spine Related Disorders*, Baltimore: Williams & Wilkins, 1990.
- Gehlbach SH: *Interpreting the Medical Literature*, Macmillan Publishing Company, 1988.
- Gillet H: A cineradiographic study of the kinematic relationship between the cervical vertebrae. *Bulletin of European Chiropractor's Union* 1980, 28(3):44-6.
- Greenstein G, Hsieh C-Y, Danielson C, Phillips RB, Lueder R: Intra-examiner reliability using the flexcurve to determine lumbar lordosis, sagittal mobility and a range of motion index. *Proc ICSM* 1990, FCER 1701 Clarendon Blvd., Arlington, VA.
- Haney PL, Mootz RD: A case report on nonresolving conservative care of low-back pain and sciatic radicular syndrome. *J Manip Physiol Ther* 1985; 8(2):109-114.
- Hansen DT, Ayres JR: *Chiropractic Outcome Measure. Chiropractic Technique*. Baltimore: Williams & Wilkins, 1991.
- Hildebrandt R: Chiropractic spinography and postural roentgenology - Part 1: history and development. *J of Manipulative and Physiological Therapeutics* June 1980, 3(2): 87-92.
- Hildebrandt RW: The chiropractic spinography issue (letter). *J Manip Physiol Therap* 1981; 4(4):171-172.
- Homewood A: A posturometer survey. *J of Canadian Chiropractic Association* 1964, 9(1):9-10.
- Hsieh C, Phillips R: Reliability of manual muscle testing with a computerized dynamometer. *J of Manipulative and Physiological Therapeutics* February 1990, 13(2):72-82.
- Hsieh C-Y, Phillips RB, Adams AH, Pope MH: Functional outcomes of low-back pain: comparison of four treatment groups in a randomized controlled trial. *J Manip Physiol Ther* 1992; 15(1):4-9.
- Inglis B, Faser B, Penfold B: *Chiropractic in New Zealand. Report of the Commission of Inquiry*. Government Pringer, Wellington, New Zealand 1979.
- Jackson R, Schafer R: *Basic Chiropractic Paraprofessional Manual*, Arlington, VA: American Chiropractic Association, 1978.
- Jamison JR: Chiropractic's functional integration into conventional health care. some implications. *J Manip Physiol Ther* 1987; 10(1): 5-10.



- Jansen R, Nansel D, Slosberg M: Normal paraspinal tissue compliance: the reliability of a new clinical and experimental instrument. *J of Manipulative and Physiological Therapeutics* 1990, 13(5): 243-246.
- Kent C, Gentempo P: *The Documentary Basis for Diagnostic Imaging Procedures in the Subluxation-Based Chiropractic Practice*, Arlington VA: ICA, 1992.
- Kent C, Gentempo P, Grostic J, Grassam I, Gregg R, Hoffman J, Hoffman: A Consensus Approach to Subluxation Based Chiropractic: Phase 1 Questionnaire Results. *Chiropractic Research Journal* 1995, 3(1).
- Kobrossi T, Schut B: The use of the objective structured clinical examination (OSCE) at the Canadian Memorial Chiropractic College outpatient clinic. *J of Canadian Chiropractic Association* 1987, 31: 21-5.
- LeBoeuf C, Gardner V: Chronic low-back pain: orthopaedic and chiropractic test results. *Aust Chiro Assoc* 1989; 19(1):9-16.
- Marback N: Complications in a low-back case. *ACA Journal of Chiropractic* 1980; 14:131-134.
- Mayer TG: Using physical measurements to assess low-back pain. *J of Musculoskeletal Med* June 1985:44-49.
- McGregor M, Minor S: Anatomical and functional perspectives of the cervical spine: Part I: the "normal" cervical spine. *J of Canadian Chiropractic Association* 1989, 33:123-9.
- Meade TW, Dyer S, Browne W, Townsend J, Frank AO: Low-back pain of mechanical origin: randomized comparison of chiropractic and hospital outpatient treatments. *Brit Med J* 1990, 300:1431-1437.
- Mellin G: Physical therapy for chronic low-back pain: correlations between spinal mobility and treatment outcome. *Scand J Rehabil Med* 1985, 17(4):163-166.
- Mennell JM: The validation of the diagnosis "joint dysfunction" in the synovial joints of the cervical spine. *J Manip Physiol Ther* 1990, 13(1):7-12.
- Mrozek J, Wiles M: A reliability assessment of four-quadrant weight-scale measurements. *Journal Canadian Chiropractic Association* 1982, 26(3): 97-100.
- Nash CL, Gregg EC, Brown RH, Pillai K: Risks of exposure to x-rays in patients undergoing long-term treatment for scoliosis. *J Bone Joint Surg* 1979, 61A:371-374.
- Palmer M, Epler M: *Clinical Assessment Procedures in Physical Therapy*. Philadelphia: Lippincott Company, 1990.
- Pressman A, Adams A: *Clinical Assessment of Nutritional Status: A Working Manual*, New York: Management Enterprises, 1982.
- Quebec Task Force on Spinal Disorders. *Spine Supplement 1*, Harper & Row Publishers, 1987:12.
- Rae PS, Waddell G, Venner RM: A simple technique for measuring lumbar spinal flexion. *Journal of the Royal College of Surgeons of Edinburgh* 1984, 29(5):281-284.
- Richards D, Thompson J, Osterbauer P, Fuhr A: Use of pre- and post-CT scans and clinical findings to monitor low force chiropractic care of patients with sciatic neuropathy and lumbar disc herniations: a review...*J of Manipulative and Physiological Therapeutics* January 1990, 13(1):58.
- Robinson GK, Lantz CA: Videofluoroscopy in chiropractic management of cervical syndrome. *J Chiro Res Clin Invest* 1991, 6(4):93-97.
- Sandoz R: The choice of appropriate clinical criteria for assessing the progress of a chiropractic case. *Annals of the Swiss Chiropractic Association* 1985, 8:53-73.
- Sawyer CE, Bergman TF, Good DW: Attitudes and habits of chiropractors concerning referral to other health care providers. *J Manip Physiol Ther* 1988, 11(6):480-483.

Wallace H, Pierce WV, Wagnon R: Cervical flexion and extension analysis using digitized videofluoroscopy. *J of Chiropractic Research and Clinical Investigation* January 1992, 94-97.