Clinical Best Practices:
Acute Low Back Pain

Introduction

Acute low back pain is one of the leading reasons for all physician visits in the United States. "It is estimated that up to 84 percent of adults have low back pain at some time in their lives."[1]

There is much evidence that supports a conservative approach for most episodes of acute low back pain, and many guidelines to support these approaches. As chiropractic physicians, we know that functional limitations, pain reduction and recurrences, and the costs associated with acute low back pain can frequently be minimized with appropriate chiropractic treatment, including but not limited to, spinal manipulation, physical therapy modalities, exercise, and patient education.

As a clinically integrated physician network, we strive to improve quality of care, treatment outcomes, and the delivery of cost-efficient healthcare. To achieve these goals, in part, HNS has and continues to develop "best practices" and has developed these best practices for the diagnosis and management of acute low back pain in patients 18 years of age or older.

The term "Best Practice" is somewhat ambiguous but is often used to indicate what institutions, and well-regarded practitioners are doing. In short, a best practice is a method or practice that conventional wisdom suggests, *is effective and will reliably lead to desired and/or improved outcomes.*

The creation of these best practices was under the purview of the 2019 HNS' Professional Affairs Advisory Boards (PAAB). The PAABs are comprised of more than seventy chiropractic physicians practicing in North and South Carolina. The PAABs were charged with identifying previously published clinical guidelines for inclusion in these best practices and for recommending additional clinical guidelines that, based on clinical experience, are likely to improve treatment outcomes while ensuring clinical autonomy.

While many of these best practices are evidenced-based, in areas where there was disagreement between the evidenced-based guideline and the opinion of the physicians serving on the PAABs, the opinion of the PAAB is duly noted.

Because HNS largely agrees with the clinical guidelines published in *Clinical Practice Guideline: Chiropractic Care of Low Back Pain* (Journal of Manipulative and Physiological Therapies. January 2016), many of these are included in these best practices.

Statement of Intent:

The treatment recommendations that follow are intended for the “typical” adult patient presenting with acute low back pain. These best practices are not intended to serve or be construed as a “standard of care” for each patient nor to be used as a substitute for the independent judgement of the chiropractor. Adherence to these guidelines will not ensure a successful outcome for every patient. There are other acceptable methods of evaluation and treatment aimed for the same result. The decision to utilize a particular assessment, clinical procedure or treatment plan must be made by the chiropractor in light of the clinical data presented by the patient, the diagnostic and treatment options available, and the patient’s preferences and values.

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For the purpose of these guidelines, acute low back pain is considered 6 weeks or less from date of onset.

II. Assessment

A thorough assessment of patients presenting with acute low back pain is essential. The assessment should focus, in part, on the presence or absence of red flags, and will determine the appropriate pathway of care for each patient.

The history and examination provide the clinical rationale for appropriate diagnosis and subsequent treatment planning. The history and physical examination should attempt to separate individuals with acute low back pain into one of the three categories below, to determine the appropriate treatment strategy.

- Serious pathology (red flags)
- Radicular nerve involvement
- Mechanical low back pain

Assessment should include, but is not limited to, the following:

- History (Presence or red and/or yellow flags)
- Functional Deficit Measurement
- Examination
- Imaging and other diagnostic testing (as applicable)
- Consideration of coordination of care/referrals

A. History

A carefully obtained history inevitably yields critical information in the assessment of acute low back pain, and should include:

- Onset and duration of pain
- Quality of pain
- Site and radiation
- Precipitating and relieving factors
- Severity and functional impact
- Neurological deficits
- Symptoms of systemic illness
- Current and past health conditions, including previous injuries

- Family medical history
- Social history
- Current and relevant past medications (both prescriptive, over-the-counter and natural products)
- Past and present treatment for the presenting condition and results of that treatment.
- Previous relevant imaging studies (or other diagnostic testing).
- All health risk factors.

During the history, obtain the name of the patient's primary care provider and/or medical specialist, and permission to contact to facilitate coordination of care.

1. Red Flags

A focused history taking is the most critical tool for identifying risk factors for serious disease (red flags) in a patient who presents with acute low back pain. "Red flags" are the current clinical features and prior illnesses that warn of a possible specific cause which may lead to serious problems unless it is treated immediately.

At each visit, DCs should evaluate for the presence or absence of red flags. Identification of a red flag in patients with acute low back pain warrants close attention, and suggests the need for further investigation and possible specialist referral as part of overall treatment strategy.

While positive red flags are typically indications for imaging, red flags should be evaluated in the context of the clinical presentation as a whole**.**

Red Flags symptoms[2]: Low back pain = **TUNA FISH**

T - Trauma
U - Unexplained Weight Loss
N - Neurologic symptoms
A - Age >55 years

F - Fever
I - IV drug use
S – Steroid use
H - History of cancer

Red Flags: **Cancer**

- History of cancer

- Unexplained weight loss >10 kg within 6 months (22lbs)
- Age over 50 years or under 18 years old
- Failure to improve with therapy
- Pain persists for more than 4 to 6 weeks
- Night pain or pain at rest

Red Flags: **Vertebral Fracture**

- Prolonged use of corticosteroids
- Age greater than 70 years
- History of Osteoporosis
- Mild trauma over age 50 years (or with Osteoporosis)
- Recent significant trauma at any age

Red Flags: **Infection**

- Persistent fever (temperature over 100.4 F)
  - Poor test sensitivity for spinal infection
- History of intravenous drug abuse
- Severe Pain
- Lumbar Spine surgery within the last year
- Recent bacterial infection
  - UTI or pyelonephritis
  - Cellulitis
  - Pneumonia
  - Wound (e.g., Decubitus Ulcer) in spine region
- Immunocompromised states
  - Systemic corticosteroids
  - Organ transplant
  - Diabetes Mellitus
  - HIV
  - Rest Pain

Red Flags: **Cauda Equina Syndrome**

- Urinary Incontinence or retention
- Saddle anesthesia
- Anal sphincter tone decreased or fecal incontinence
- Bilateral lower extremity weakness or numbness
- Progressive neurologic deficit
  - Major motor weakness
  - Major sensory deficit

Fig 1. *Red Flag Symptoms: Low Back Pain*.[2]

2. Yellow Flags

While the presence of red flags indicates the potential for serious life or limb threatening pathology, psychosocial risk factors (yellow flags) include the patient's attitudes and beliefs, emotions, behaviors, and family and workplace factors.

In the *Guide to Assessing Psycho-social Yellow Flags in Acute Low Back Pain,* Kendall and Linton state:

> The goal of identifying yellow flags is to find factors that can be influenced positively to facilitate recovery and prevent or reduce long-term disability and work loss. This includes identifying both the frequent unintentional barriers, and the less common intentional barriers to improvement.[3]

Per the article, *Management of people with acute low back pain: model of care,*[4] yellow flags include:

- Belief that pain and activity are harmful
- Sickness behaviors
- Low or negative moods, mental illness
- Treatment that does not fit with best practice
- Problems with compensation system
- Previous history of back pain with time off work
- Problems at work, poor job satisfaction
- Overprotective family or lack of social support[4]

HNS agrees that:

> When relevant psychological factors are identified, the rehabilitation approach should be modified to emphasize active rehabilitation, graded exercise programs, positive reinforcement of functional accomplishments, and/or graduated exposure to specific activities that a patient fears as potentially painful or difficult to perform.[5]

As with red flags, DCs should evaluate yellow flags in the context of the clinical presentation as a whole**.**

3. Functional Deficit Measurement (Baseline Outcome Assessment)

The importance of a patient's perspective regarding his/her condition relative to function, pain, health status, work disability, and

effectiveness of treatment is well-known and should be established prior to the onset of treatment.

As Globe states in *Chiropractic Care of Low Back Pain*[6]:

> For a trial of care to be considered beneficial, it must be substantive, meaning that a definite improvement in the patient's functional capacity has occurred. Examples of acceptable outcome assessment tools include the following:
>
> a. Pain scales such as the Visual Analog Scale and the numeric rating scale.
> b. Pain diagrams that allow the patient to demonstrate location and character of their symptoms.
> c. Validated ADL measures, such as the Revised Oswestry Back Disability Index, Roland Morris Back Disability Index, and Bournemouth Disability Questionnaire.
> d. Increases in home and leisure activities, in addition to increases in exercise capacity.
> e. Increases in work capacity or decreases in prior work restrictions.
> f. Improvement in validated functional capacity testing, such as lifting capacity, strength, flexibility, and endurance.[6]

4. Radicular Pain

Thorough history and evidence-informed examination are critical components of chiropractic clinical management, particularly in the presence of radicular complaints. These procedures provide the clinical rationale for appropriate diagnosis and subsequent treatment planning.

If radiating pain, in addition to the above, History should include:

a. Does the patient have a history of previous radicular symptoms?

b. Questions to differentiate where the radiating pain comes from:

i. Where is the pain?
ii. How far down the leg does pain radiate?
iii. Is the radiating pain related to positional changes?
iv. Is the leg pain bilateral?
(If so, consider prostate issues, spinal stenosis, metastatic carcinoma, pathologic fx., central disc prolapse, etc.)

c. Did the leg pain, tingling or numbness occur prior to the presence of low back pain? (If so, consider diabetic neuropathy or other pathological etiologies.)

d. Is the pain constant or intermittent?

e. Do the leg symptoms exacerbate with activity and immediately remit with rest?

f. How long is the refractory period before pain goes away?

g. Questions regarding comorbidities, such as neurologic or vascular claudication, diabetes, smoking, ETOH use, obesity, side effects of statins, chemotherapy, and to rule out piriformis entrapment and other myofascial considerations.

5. Red Flags - Radicular Pain

No changes to above recommendations.

B. Examination:

The initial examination is intended to identify the etiology of the patient's presenting complaints. The history should focus the extent and region of the examination.

Outcome assessments must be utilized during the initial examination in order to establish a functional baseline, and, in part, determine treatment strategy.

Key aspects of the physical examination in patients with acute low back pain include:

- Vitals (at a minimum, weight, pulse, and blood pressure)
- Observations (e.g., patient's posture, gait, demeanor, pain behavior)
- Palpation, including structural abnormalities, tenderness, muscle spasticity, etc.)
- Outcome assessments to establish a functional baseline
- Outcome assessments for pain
- Appropriate chiropractic tests including spinal palpation findings and ROM testing
- Relevant orthopedic and neurological tests
- Consideration of imaging studies and other diagnostic tests

Acute low back pain is often nonspecific and therefore cannot be attributed to a definite cause. Careful history-taking and physical

examination are crucial in attempting to diagnose the underlying cause and in determining the most appropriate pathway to treatment.

1. Radicular Pain

If radiating pain, in addition to the above, Examination should include:

a. Inspection of lower extremities for pitting edema, asymmetrical dorsalis pedis pulse, ankle blood pressure findings, color changes, wounds, or temperature changes.

b. Evaluate for lower extremity compartment syndrome or vascular insufficiencies. (Notation of discoloration of patient's nail beds to rule out vascular etiology.)

c. Endeavor to identify lower extremity motor deficits, muscular weakness, and/or atrophy.

d. Determine what dermatome is affected.

e. Testing to rule out myofascial entrapment syndromes, such as with piriformis, hamstrings, tibialis anterior.

f. Compression testing to rule out cervical cord compression.

C. Diagnostic Testing

Imaging and other diagnostic tests are indicated in the presence of severe and/or progressive neurologic deficiencies or if the history and physical examination cause suspicion of serious underlying pathology.

HNS notes the existence of studies which show that routine imaging or other diagnostic tests are not recommended for patients with **non-specific low back pain**.[2]

For a very thorough review of clinical indications for the appropriate utilization of spinal imaging, refer to Bussieres, et al. *Diagnostic Imaging Practice Guidelines for Musculoskeletal Complaints in Adults*. J Manipulative Phsiol Ther. 2008:31(1).

1. Imaging

The following types of imaging modalities are most frequently used in the diagnostic process:

a. Plain film or digital radiographs
b. CT
c. MRI
d. Spine Bone Scan

e. Ultrasound

Plain X-rays
In *Assessment and Management of Acute Low Back Pain,* Bratton indicates there is evidence that plain radiographs are not necessary in the initial evaluation of acute low back pain within the first month unless a finding from the history and clinical examination raises concern.[7]

NCQA Standards
The National Commission for Quality Assurance (NCQA) maintains quality and performance standards for certain conditions, including, but not limited to, the use of imaging studies for patients with a primary diagnosis of uncomplicated low back pain.

The NCQA Standard relating to imaging for LBP states that for patients between the ages of **18-50** with a primary diagnosis of low back pain, ***in the absence of certain red flags***, imaging studies within 28 days of the initial diagnosis of low back pain are not considered clinically appropriate

Many health plans, including BCBS, are expected to ensure compliance to these standards, and expect participating providers to comply with these standards

It is the position of the HNS Professional Affairs Advisory Boards, however, that clinical decision-making regarding the appropriateness of all diagnostic testing (particularly x-rays) should be determined by the chiropractor in light of the clinical data presented by the patient, the diagnostic and treatment options available, and the patient's preferences and values.

CT/MRI
CT and MRI testing should be considered only after a careful review of the history and results of the physical examination, and/or in response to treatment.

Polansky states in *Diagnosing Acute Low Back Pain*[8]:

> CT and MRI scans of the lumbosacral spine are more sensitive than plain films but are generally only indicated for patients with acute back pain if clinical findings suggest possible emergent conditions affecting the spine, including but not limited to, Cauda Equina Syndrome, infection, fracture with neurologic deficits, and tumors.

- CT is superior to MRI for revealing bony abnormalities and may be particularly useful if plain films are abnormal or inconclusive.

- MRI is preferred to CT because it provides better visualization of non-bony structures, and does not subject the patients to radiation.[8]

Bone scans
Bone scans are used to detect and monitor infection, fracture, or disorders in the bone.

Ultrasound imaging
Ultrasound imaging (sonography), uses high-frequency sound waves to obtain images inside the body. Ultrasound imaging can show tears in ligaments, muscles, tendons, and other soft tissue masses in the back.

2. Imaging Studies Taken Elsewhere

If the patient brings (or provides) past healthcare records, including but not limited to, results of imaging studies, copies of these should be added to the patient's healthcare record.

Further, the healthcare record must include a summary of all relevant information obtained from the review of the records/studies, and this summary must be signed by the DC.

3. Other Diagnostic Tests

As with imaging studies, other diagnostic tests, including but not limited to electrodiagnostic and laboratory tests, should be considered only after careful review of the history and results of the physical examination, and in response to treatment.

Electrodiagnostics

Electrodiagnostics are primarily used to confirm whether a person presenting with acute low back pain has lumbar radiculopathy. The procedures include electromyography (EMG), nerve conduction studies (NCS), and evoked potential (EP) studies.

Laboratory tests

There is evidence that indicates laboratory tests are generally not necessary in the initial evaluation of acute low back pain.

In American Family Physician's *Assessment and Management of Acute Low Back Pain*, Bratton states:

> Laboratory tests generally are not necessary in the initial evaluation of acute low back pain. If tumor or infection is suspected, a complete blood cell count and erythrocyte sedimentation rate should be obtained. Other blood studies, such as testing for HLA-B27 antigen (present in ankylosing spondylitis) and serum protein electrophoresis (results in abnormal multiple myeloma), are not recommended unless clinically warranted. Additional laboratory tests, such as urinalysis, should be tailored to the possible diagnosis suggested by the history and physical findings.[7]

Acute low back pain is often nonspecific and therefore cannot be attributed to a definite cause. Careful history-taking and physical examination are crucial in attempting to diagnose the underlying cause and in determining the most appropriate pathway to treatment.

4. Radicular Pain

If radiating pain, imaging studies should be considered only after careful review and correlation of the history and examination.

a. Advanced imaging (i.e., MRI or CT scans) should be considered for patients displaying definite motor deficits, such as positive heel walk test, toe walk test, foot/ankle weakness against resistance, saddle numbness, loss of bowel or bladder function.

b. Advanced imaging may be appropriate if the patients are unresponsive during the initial treatment cycle, or symptoms worsen.

c. If MRI is indicated, a consultation with radiologist is appropriate to determine value of contrast studies in situations of spinal trauma, suspicion or history of cancer, possibility of pathologic fracture with retropulsion onto cord, or suspected infection.

d. Diagnostic ultrasound should be considered in patient with symptoms suggestive of vascular etiologies.

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e. Patients with non-dermatomal symptoms who are largely non-responsive during a single treatment cycle may be candidates for NCV/EMG testing.

III. Coordination of Care/Specialist Referral

Both initially and throughout care, providers should consider coordination of care and/or referrals.

As applicable, the healthcare record should include evidence of continuity and coordination of care.

The health care record must include any recommendations to the patient to see his/her Primary Care Provider (PCP), the basis for the recommendation, and evidence of any coordination of care, including but not limited to, any referrals to/from other health care providers.
All communications (written, telephone, etc.) to and from other health care professionals must be included in the clinical record.

A. Specialty Care

Specialty referral should be considered for potential surgical candidates, those for whom the diagnosis is uncertain, or those unresponsive to treatment.

As noted in the Institute for Clinical Systems Improvement, *Adult Acute and Subacute Low Back Pain*[9]:

Indications for specialty referral may include the following:

Medical spine specialist

- Atypical chronic leg pain
- Chronic pain syndrome
- Ruling out inflammatory arthopathy
- Ruling out fibrositis/fibromyalgia
- Ruling out metabolic bone disease (e.g., osteoporosis)

Surgical spine specialist:

- Cauda Equina Syndrome
- Progressive or moderately severe neuromotor deficit (e.g., foot drop or functional muscle weakness such as hip flexion weakness or quadriceps weakness)
- Persistent neuromotor deficit after four to six weeks of conservative treatment (does not include minor sensory changes or reflex changes)
- Uncontrolled radicular pain with defined lesion on imaging[9]

1. Radicular Pain

If radiating pain, in addition to the above, referral should be considered:

a. If the patient is unresponsive during the initial treatment cycle, or if symptoms worsen.

b. When patient presents with symptoms suggestive of intermittent vascular claudication.

c. When a patient exhibits signs of cauda equina syndrome or aortic aneurysm there should be an emergency referral to a specialist without further evaluation or imaging.

IV. Diagnoses

The history and examination provide the clinical rationale for appropriate diagnosis and subsequent treatment planning.

For each patient, establish a diagnosis (or diagnoses) based on the history and clinical exam findings.

The diagnosis or diagnostic impression must be reasonable based on the patient's chief complaint(s), results of clinical exam findings, diagnostic tests, and other available information.

The patient's healthcare record must reflect all diagnoses/clinical impressions that coexist at the time of the visit that require or affect patient care.
Diagnoses must clearly support the treatment outlined in the treatment plan.

All services/DME provided shall be supported by an appropriate diagnosis.

Any changes in diagnoses must be documented in the healthcare record.

1. Radicular Pain

No changes to above recommendations.

V. Education

Patient education and managing the patient's expectations are an important part of the treatment of acute low back pain. Successful treatment depends on the patient's understanding of the condition and his/her role in recovery and in avoiding re-injury.

Acute low back pain often creates new concerns, even fear about their short and long-term health. It is important to address both these concerns and to establish reasonable patient expectations. DCs should educate patients regarding their condition, and their role and responsibility in achieving a positive outcome, and should help manage patient expectations.

Prior to initiating treatment, it is essential to provide the patient with clear, concise information regarding their condition, the treatment recommended, the anticipated length of treatment, the anticipated outcome, and his/her role in helping to achieve the desired outcome. Additionally, information on the causes of back pain, pain resolution, usual activity/work, prevention strategies, when to contact the DC, and, as applicable, when referral may be appropriate is also helpful.

At a minimum, education should include these points:

- Acute low back pain is a symptom and, in most situations, does not indicate serious disease.
- Patients should take responsibility for, and actively participate in, the rehabilitation process.
- Stress the importance of staying active, and continuing daily activities as normally as possible.
- Emphasize the importance of compliance to the treatment plan.
- Review what symptoms to watch for and when to contact the chiropractic physician.

A. Radicular Pain

If radiating pain, in addition to the above, Education should include:

1. Radicular symptoms are typically slower developing and not the result of an acute insult, therefore resolution is usually more protracted than conditions without radicular symptoms.

2. Advise the patient to inform you if the radiating pain increases or decreases throughout the treatment process.

3. Make clear that workplace ergonomics, dietary changes, lifestyle changes are critical with radicular symptoms.

VI. Consent

Prior to initiating treatment for any condition, informed consent must be obtained from the patient.

Physicians must keep in mind that informed consent is a process, and involves making sure the patient understands the proposed treatment, the risks of the treatment, and agrees to accept both. To assure an appropriate level of patient understanding, the process should involve discussion and should always include an opportunity for the patient to ask questions.

Physicians shall obtain new informed consent when presented with a new condition that was not addressed when the previous informed consent was obtained.

While HNS recommends the use of the *HNS Informed Consent Form*, any similar form is acceptable, *provided the form clearly states the treatment to be provided and addresses the specific risks discussed with the patient*.

All informed consent forms shall be dated and signed by the patient.

The healthcare record shall include written evidence that informed consent was obtained prior to initiating care and shall reflect that new consent was obtained when the patient presents with a new condition not addressed when the previous consent was obtained.

A. Radicular Pain

If radiating pain, in addition to the above, the patient should be advised of possible complications of untreated radiculopathy, including but not limited to:

- Permanent nerve damage
- Permanent loss of sensation and motor control
- Incontinence.

VII. Treatment

At the onset of treatment, the physician should provide the patient with estimates of the time within which to expect initial improvement and the time within which to expect maximum therapeutic benefit. The physician should adequately explain to the patient the nature of the patient's condition, the goals of treatment, and the treatment strategy.

A. Treatment Plan

Once the diagnosis has been established based on the history and clinical exam findings, for each episode of acute low back pain an individualized treatment plan shall be established. Each treatment plan shall include objective, measurable and reasonable treatment goals intended to improve a functional deficit and reduce pain.

As Globe states in *Chiropractic Care of Low Back Pain*, "One of the goals of any treatment plan should be to reduce the frequency of treatments to the point where maximum therapeutic benefit continues to be achieved while encouraging more active self-therapy, such as independent strengthening and range of motion and rehabilitative exercises."[6]

Each treatment plan should:

- Be based on HNS' Philosophy of Care:
  "Treat and Release"; provide care to correct the presenting condition, bring the patient to maximum medical improvement, and discharge the patient from active care with appropriate instructions regarding maintenance/supportive care, self-care, and prevention of future occurrences.

- Include all recommended treatment, including but not limited to, manipulations, modalities/therapies, DME, and home instructions.

- Include recommended activity modifications and home care instructions.
  .
- Include anticipated duration of treatment, including frequency of visits. (The *initial* treatment plan should not exceed approximately 4 weeks or 12 office visits, (whichever occurs first), but may be modified should the objective data from the first re-evaluation indicate the appropriateness of additional care.)

- Include objective measures to evaluate treatment effectiveness.
- Include expected outcomes.

- Reference obstacles to recovery and strategies to overcome them.

Treatment plans should be modified, as applicable, in response to changes to the patient's condition.

1. Radicular Pain

If radiating pain, in addition to the above, Treatment Plans should reflect the following:

a. To be consistent with an evidence-based approach, chiropractors should use clinical methods that generally reflect the best available evidence, combined with clinical judgement, experience, and patient preference. Currently, the most robust literature regarding manual therapy supports HVLA techniques and mobilization, such as flexion-distraction. Therefore, in the absence of contraindications, these methods are generally recommended.

b. Although current evidence does not generally support the use of therapeutic modalities in isolation, their use as part of a passive to active approach may be warranted based on clinician judgement and patient preference.

c. Passive care may be initially emphasized, but active care (i.e., exercise) should be increasingly integrated into the treatment plan in order to increase function and return the patient to regular activities of daily living.

B. Treatment Frequency and Duration

While some patients may respond more quickly, a typical course of treatment for acute low back pain is 6 to 12 chiropractic sessions over the course of 2 to 4 weeks.

Although most patients respond within expected time frames, frequency and duration of treatment may be influenced by factors, including but not limited to, co-morbidities, yellow flags, and patient compliance to the treatment plan (including recommendations regarding activity modification and home care instructions). Depending on these factors, additional time and treatment may be needed.

After each course of treatment, the patient should be evaluated regarding the effectiveness of treatment, whether maximum therapeutic benefit has been reached, and to determine the appropriateness of additional chiropractic treatment.

1. Radicular Pain

If radiating pain, more frequent treatment and a protracted treatment period may be necessary.

C. Patient Compliance

Successful treatment depends, in part, on the patient's understanding of the condition and his/her role in recovery and in avoiding re-injury.

Because the patient compliance and active participation in the treatment plan is essential to success, the physician should refer or discharge a patient who fails to comply with treatment recommendations.

VIII. Initial Course of Treatment

The goals of treatment for acute low back pain are to relieve pain, improve function, reduce time away from work, and develop strategies to prevent recurrence.

During the initial phase of treatment of acute low back pain, the decision regarding treatment must be made in light of the clinical data presented by the patient, the diagnostic and treatment options available, and the patient’s values and expectations.

During the initial course of treatment, DCs should continue to evaluate for the presence or absence of red flags.

The following are treatment considerations for the typical patient presenting with acute low back care.

As noted by the Institute for Clinical Systems Improvement in *Adult Acute and Subacute Low Back Pain*, "After two weeks of severe pain or impairment in function, the examiner should start a formal delayed-recovery assessment and consider intervention."[9]

A. Manipulation/Mobilization.

HNS agrees with the following clinical guideline in *Chiropractic Care of Low Back Pain* which is described below:

> Most literature regarding spinal manipulation for low back pain is based on high velocity, low-amplitude (HVLA) techniques, and mobilization, such as flexion-distraction. Therefore, in the absence of contraindications, these methods are generally recommended. However, best practices for individualized patient care, based on clinical judgment and patient preference, may require alternative clinical strategies for which the evidence of effectiveness may be less robust.[6]

The decision regarding the use of HVLA or instrument-adjusting should be based on clinical judgment, experience, and patient preference.

1. Cautions and Contraindications

In certain cases, the appropriateness of manipulative procedures must be considered.

> In some complex cases where biomechanical, neurological, or vascular structure or integrity is compromised, the clinician may need to modify or omit the delivery of manipulative procedures. Chiropractic co-management may still be appropriate using a variety of treatments and therapies commonly used by DCs. It is prudent to document the steps taken to minimize the additional risk that these conditions may present.[6]

a. Radicular Pain

If radiating pain, utilization of flexion distraction techniques or axial decompression may be helpful.

B. Therapeutic Modalities and Therapeutic Procedures

In conjunction with spinal manipulation, therapeutic modalities/procedures may provide therapeutic benefit and or reduction in pain in the treatment of patients with acute low back pain. These include but are not limited to, ice/heat, electrical stimulation, laser treatment, ultrasound treatment, decompression, acupuncture, and transcutaneous electrical nerve stimulation.

"Cold packs and superficial heat are useful for relieving symptoms of acute low back pain. These modalities provide analgesia and muscle relaxation. However, their use should be limited to the first two to four weeks after the injury."[11]

As soon as clinically appropriate, consideration should be given to moving from passive therapies to active therapies in an effort to increase function and return the patient to regular activities.

2. Radicular Pain

No changes to above recommendations.

C. Activity Modification

Patients should be advised to maintain normal activities, as tolerated, during the acute stage of low back pain and should progressively increase their physical activity levels according to a plan agreed upon between the DC and the patient.

"Among patients with acute low back pain, continuing ordinary activities within the limits permitted by the pain leads to more rapid recovery than either bed rest or back-mobilizing exercises."[10]

1. Radicular Pain

If radiating pain, activity modification may be necessary.

Based upon the patient complaints and the specific etiology of the radiculopathy, the physician shall determine if activity modification is necessary, and the extent of the activity modification.

The patient should avoid activities which cause pain, or which worsen radicular symptoms.

Increased activity should be under the doctor's consent only and should be closely monitored.

IX. Reevaluation

As noted in Section VIIB. (Treatment Frequency and Duration), it is not uncommon for patients with acute low back pain to require 6 to 12 chiropractic sessions over the course of 2 to 4 weeks.

A focused re-evaluation shall be performed after an initial course of care (4 weeks or 12 visits, whichever comes first).

Outcome assessments for pain and function shall be utilized at each re-evaluation (and throughout the course of care) to 1) measure patient progress towards treatment goals, 2) determine the effectiveness of treatment, 3) evaluate the appropriateness of additional treatment, and 4) determine if maximum therapeutic benefit has been reached.

As part of the reevaluation, and throughout the treatment, DCs must remain watchful for the appearance of red flags.

Reevaluation of low back pain should include the following:

- Pain reassessed with a repeat VAS and appropriate disability outcome assessment measures
- Repeat of positive chiropractic, orthopedic and neurological findings from previous evaluation
- As applicable, recommendations regarding modifications to activities/work

The results of the reevaluation should guide clinical decision-making regarding the next steps in care and should be clearly explained to the patient.

A. Radicular Pain

If radiating pain, in addition to the above, the reevaluation should include an evaluation of the degree of peripheralization by monitoring motor and sensory deficits.

X. Continuing Course of Treatment

During each office visit, the physician should inquire as to the patient's presenting complaints, perform the treatment called for in the treatment plan, and monitor the patient's clinical picture through the use of objective tests such as range of motion, segmental range of motion, presence or absence of spasm or swelling, presence or absence of positive orthopedic findings, and pain assessment.

As the patient's condition improves, the frequency of treatment should gradually decline until the patient reaches the point of discharge. An acute exacerbation may require more frequent care. The treatment time may be extended due to complicating factors.

If maximum therapeutic benefit is not reached during the initial course of care, and provided there is clear evidence that substantive, measurable function gain has occurred, a follow up course of treatment may be warranted. As a general rule, during this phase of care, patients should be encouraged to return to usual activity levels.

The decision regarding continued treatment, and the frequency of it, largely depends on the severity and duration of the condition and whether the patient has reached maximum therapeutic benefit.

A. Maximum Therapeutic Benefit

Maximum Therapeutic Benefit occurs when a patient with an illness or injury reaches a state where additional, objective, measurable improvement cannot reasonably be expected from additional treatment and/or when a treatment plateau in a person's healing process is reached.

HNS refers to (and agrees with) the following clinical guideline included in *Chiropractic Care of Low Back Pain*:

> When the patient's condition reaches a plateau or no longer shows ongoing improvement, a decision must be made on whether the patient will need to continue treatment. Generally, progressively longer trials of therapeutic withdrawal may be useful in ascertaining whether therapeutic gains can be maintained without treatment.[6]

1. Radicular Pain

When a patient with unresolved radiating pain reaches a state where additional, objective, measurable improvement cannot reasonably be expected from additional chiropractic treatment, advanced imaging and/or a specialist referral is warranted.

Similarly, when a treatment plateau in a person's healing process is reached, and the radiating pain is unresolved, advanced imaging and/or a specialist referral is warranted.

B. Exacerbation/Flare-ups

As indicated in *Chiropractic Care of Low Back Pain*:

Additional chiropractic care may be indicated in cases of exacerbation/flare-up in patients who have previously reached MTB if criteria to support such care (substantive, measurable prior functional gains with recurrence of functional deficits) have been established.[6]

1. Radicular Pain

Depending upon the specific etiology of the radiating pain, and the severity of the flare-up, the physician may consider a specialist referral for further evaluation.

XI. HNS Performance Expectations

These Best Practices represent HNS' performance expectations for all contracted physicians. These Best Practices are posted on the HNS Website under 'Clinical Resources'.

XII. Summary

These best practices were created for the HNS physician network (and other key stakeholders) and summarize HNS' practice recommendations for the chiropractic management of adult patients with acute low back pain, and with radiating pain. They are intended to improve treatment quality and outcomes, and to promote the delivery of cost-efficient chiropractic care.

In a value-based healthcare environment, there is a vast difference between merely treating someone versus delivering best practices. The essential step for improving clinical outcomes is to provide the most effective care for every patient on every visit. Timely clinical outcomes, cost effective management, and high patient satisfaction are the key metrics to which all physicians should aspire.

XIII. References

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