

# **CHRONIC NONINTERVENTIONAL, NONCANCER PAIN PROTOCOL**

## **INTRODUCTION:**

- Chronic pain is often defined as pain originating from an injury and lasting in excess of three months. It also refers to pain outlasting an expected duration of healing for the tissue injury incurred, as defined by evidence-based guidelines based on the diagnosis. It is manifested by inappropriate pain, or an out of proportion amount of pain related to an injury or illness. It is not predicted by acute pain levels. Common clinical manifestations include persistent pain complaints, anxiety symptoms, impaired function beyond that anticipated based on the injury and degree of physical injury, depression, and anger/fear. It is often associated with psychosocial problems. Addictive behaviors, marked somatic over focus, and factitious disorders can form barriers to recovery. Chronic pain is not a phenomenon limited to anatomical or physiologic parameters.
- The effective management of the patient with chronic pain involves the coordination of multiple medical and psychiatric specialties, and the implementation of a systematic assessment of an affected individual's biopsychosocial parameters, as well as the provision of an organized methodology of routine reassessment and adjustment of a proactive, functionally based program to restore health and return to a productive life. The goal of chronic pain management is to improve function with minimal intervention. There is often a delicate balance between under and overtreatment of chronic non-cancer pain. This protocol outlines optimal strategies for patient management and should not be viewed as being prescriptive or prohibitive in nature.
- The treating medical practitioner's judgement, supported by an evidence-based medical plan, is paramount in the implementation of care for any specific patient. This protocol, therefore, is intended to assist in the provision of a guide to improve health care services for injured workers by outlining the appropriate evaluation and treatment procedures for the management of chronic, non-cancer pain in injured workers who do not have acute pain and are not acutely postoperative in nature and in whom the cause is determined to be work-related.

## **DEFINITIONS:**

- The International Association for the Study of Pain defines pain as “an unpleasant sensory and emotional experience with actual or potential tissue damage”; a complex experience involving physical, mental, social, and behavioral processes that often compromise the quality of life. Pain can be perceived without tissue damage or a clearly identified pathophysiologic cause. Chronic pain management may be life long, and/or require repeat cycles of chronic pain treatment.

## **PAIN CLASSIFICATIONS:**

- **Nociceptive pain:**
  - Originates from visceral origins or other tissues.
- **Myofascial pain:**
  - Nociceptive pain characterized by myofascial trigger points limited to specific muscles, in predictable locations, and can have possible psychogenic components.
- **Neuropathic pain:**
  - Originates from the central nervous system (CNS) or peripheral nervous system (PNS). Central and neuropathic mechanisms may confound nociceptive processes. Pain can involve neural remodeling within the spinal cord as well as higher levels of the CNS, changes in membrane responsiveness and connectivity leading to larger and more intricate pain pathways, and neurotransmitter recruitment. In addition, alterations in gene function/expression can lead to functional changes which, in turn, can lead to chronic pain in other body regions than that involved in the original injury.
- **Psychogenic pain:**
  - Originates in social, character, mood, and/or psychophysiological processes.

## **INITIAL EVALUATION**

- Thorough history and physical exam
- Completion of appropriate pain questionnaire(s) (such as Zung Self-Rating Depression Scale, Modified Somatic Perception Questionnaire, Oswestry Disability Index, and/or the Fear Avoidance Behavior Questionnaire)
- Drug/alcohol use (past and present)
- Nicotine use
- Psychiatric history
- Full medication list
- Social history
- Work history
- Legal history
- Employment history
- Evaluation of patient expectations

## **HISTORY:**

- Nature and intensity of the pain
- Current and past treatments for pain,
- Underlying or coexisting diseases or conditions
- Effect of the pain on physical and psychological function
- History of substance abuse.
- Thorough psychosocial history
- Medical management history
- Other factors that may affect treatment outcome or form barriers to recovery

### **PHYSICAL EXAM:**

- Should include focused examination of the relevant body systems affected by the original work injury
- Psychologic evaluation
- Presence of atrophy
- Posture and gait abnormalities
- Observation of non-organic signs
- Vital signs
- Speech and thought
- Active/ passive range of motion
- Strength testing
- Reflexes
- Sensation and neural tension

### **DIAGNOSTIC TESTING:**

- Treatment modalities may be utilized sequentially or concomitantly, depending on chronicity and complexity of the problems.
- Care should be exercised to avoid duplicative services/testing.
- The focus of testing should be to most accurately diagnose any underlying illnesses or physical residua of the original injury, as well as the determination of level of function, physical conditioning, and delineation of contributing biopsychosocial factors delaying recovery.
- Testing should only be considered if there is a potential for meaningful subsequent intervention, based on the testing results.

### **FUNCTIONAL/WORK/PHYSICAL CAPACITY EVALUATION:**

- Systematic, structured evaluation of the injured worker's level of physical function, conducted by an appropriately trained individual (usually an occupational or physical therapist).
- Functional Capacity Evaluations (FCEs) including battery of performance based testing determine a patient's ability to work and perform activities of daily living (ADL). In general, an FCE is utilized to assist in goal-setting and rehabilitation planning, monitor a patient's rehabilitation progress, assess an individual's participation level and performance consistency. Several models are used, each with assessment of inter-and intra-rater reliability. FCEs typically include:
  - Identification of an individual's ability to perform specific job tasks.
  - Assess an individual's ability to perform physical activities associated with any job.
  - Bases of objective determination of impairment.
  - Includes battery of standardized reliability/validity tests, as well of assessment of consistent effort.

### **JOB SITE EVALUATION:**

- Thorough systematic review of the injured worker's worksite and essential functions required to perform her/his job again.
- Review should include all potential alternative jobs available to the worker upon her/his return to work.

### **VOCATIONAL ASSESSMENT:**

- Assessment of the worker's vocational capabilities/qualifications
- Particularly useful if return to the former place/position of employment is unlikely to be an option for return to work.
- Usually performed by an occupational therapist or vocational counselor.

### **WORK TOLERANCE SCREENING:**

- Conducted upon initial evaluation, as well as at regular intervals (every 3 to 4 weeks, up to a total of 6 evaluations).
- Can be conducted as part of a functional capacity evaluation (FCE).

### **PSYCHOLOGICAL SCREENING:**

- Identification of psychosocial issues should be a major aspect of the initial evaluation of a patient with chronic pain.
- Referral to an interdisciplinary program as part of the initial care of a chronic pain patient should be strongly considered to minimize disability and maximize function.
- Documentation should be provided regarding the causal connection of the ongoing disability to a work event/injury/illness, as part of a referral to such a center.

### **TREATMENT:**

- All treatment rendered should be based on the prevailing underlying original diagnosis, utilizing appropriate diagnostic procedures, and should be accompanied by an aggressive return to work (full or modified capacity) program.
- Frequent reassessment, focusing on functional improvement with effective pain reduction, should be documented.
- **INITIAL CARE:**
  - Intervention should be time-limited and goal-oriented. In general, injured workers returning to work sooner after an injury tend to have better outcomes.
  - Focus of chronic pain management should be on proactive, function-based approaches to care. Keeping the patient as physically active as possible is key to recovery.
  - Goal is to gradually increase activities to regain a fully functional status, while learning how to interpret and manage pain.
  - Referral to an interdisciplinary rehabilitation treatment program should be pursued.

- **INTERDISCIPLINARY REHABILITATION TREATMENT PROGRAMS:**
  - Two fundamental types of multispecialty rehabilitation programs: multidisciplinary program (one or two specialists who direct the services of a number of team members, with each specialist often having independent goals), and interdisciplinary pain program (IPRP). IPRPs are preferred, based on a multispecialty team approach that is outcome focused and coordinated, offering goal-oriented interdisciplinary services (such as the Arrigan Center).
  - The team often includes a physical and/or occupational therapist, psychologist, vocational counselor, nurse, and case manager, as well as physician(s) (including pain specialists), and/or physician assistants and/or nurse practitioners.
  - Typically, one medical practitioner serves as the primary source for the coordination of care and monitoring of the treatment plan in conjunction with other health care specialists.
  - Criteria for admission to IPRPs include the presence of an identified etiology underlying the chronic pain condition, as well as failure of appropriate medical/invasive care to restore functional status.
  - Initial screening/assessment indicates rehabilitation potential. No contraindications to program participation (such as substance abuse disorder, cognitive limitations, or unstable medical conditions). N
  - Specific time frame exists to guide referral to an IPRP. Many patients manifest signs of chronic pain early on in their case; others do not.
  - Identification of psychosocial issues constitutes a major aspect of initial evaluation or consultation of patients with suspected chronic pain. Depression, anxiety, fear avoidance behavior, catastrophizing, poor coping, and poor self-efficacy correlate with poor outcomes.
  - Mental health issues as concomitant presentations or, in the past medical history or family history, should be identified.
  - Dysfunctional relationships with family members, friends, coworkers, or supervisors can be indicative of underlying behavioral medicine needs, thoroughly explored in a comprehensive manner.
  - Substance abuse related concerns are paramount to explore.
  - Any suspicion of barriers to progress from these psychosocial issues will prompt involvement of a behavioral medicine team member

- Patients should be encouraged to take an active role in establishing functional outcome goals.

## **ONGOING CARE**

- **TREATING PHYSICIAN VISITS:**
  - Ongoing evaluation with the primary treating physician should be comprehensive, utilizing diagnostic tools such as pain questionnaires and diagrams, assessing the accuracy of the relevant medical history, assessing pain behaviors, medication use (particularly opiates), and the psychosocial milieu of the patient.
  - Ongoing education of the patient regarding functional status, as well as the need to engage in a functional rehabilitation program focusing on restorative exercises.
  - Pharmaceutical use should be clearly and concisely discussed, often with the provision and discussion of a pain contract.
  - Follow-up visits should initially be quite frequent (every 1-2 weeks), but later can be tailored to the patient's needs.
  - Once the patient has reached a point of maximum medical improvement, a follow-up visit schedule of every 6 to 12 months may be appropriate.
  - If objective clinical improvement is delayed or slower than expected, the treating provider must justify the necessity of continued care with a valid clinical rationale, with supporting objective clinical findings. Time frames for specific interventions commence once treatments are initiated, not on the date of injury.
- Specific yearly treatment guidelines:
  - Chiropractic treatment: up to 20 visits (based on treatment plan).
  - Physical and occupational therapy: up to 20 visits each (again based on treatment plan).
  - Work conditioning/hardening programs: up to 20 visits, including extended visits > 4 hours. Includes return to work goal but can also be performed in concert with a return to restricted work activities.
  - Acupuncture (performed by a licensed health care provider, and ordered by DC, MD, DO, PA, PT, or NP). Up to 8 visits/first 6 weeks, with extension limited to 16 visits over 12 weeks.



## **MEDICATIONS**

**GENERAL:** Coordination of medications should occur between treating providers, with an agreed upon general course of multidisciplinary treatment determined and routinely reassessed. As toxic effects of medications and drug-related problems may have significant medical and safety consequences for older adults, use of consensus criteria for safe medication use in elderly patients, such as the Beers criteria (2002 criteria for potentially inappropriate medication use in older adults), is recommended (*Arch Intern Med.* 2003; 163:2716 – 2724).

**NEUROPATHIC PAIN:** 3 lines of treatment are currently defined:

- First line: pregabalin, gabapentin, duloxetine, amitriptyline.
- Second line: capsaicin and lidocaine (also used as first-line for focal neuropathic pain).
- Third line: opioids.
- Carbamazepine and oxcarbazepine are not generally recommended but may be useful and certain singular cases.

**NSAIDs:**

- NSAIDs may be indicated for use in chronic pain. Acetaminophen is recommended for those patients with contraindications for NSAIDs. Cytoprotective agents may need to be employed in patients with a history of gastrointestinal issues.

**ANTIDEPRESSANTS:**

- Have been utilized for many years for the treatment of chronic pain.
- Where depression is moderate to severe, the dosage of antidepressants should be based primarily on the treatment of the depression, not of the chronic pain. In such cases, it is advisable to consult a mental health professional for guidance.
- Two main antidepressant classes used for chronic pain management:
  - Tricyclic antidepressants (TCAs)
  - Serotonin norepinephrine reuptake inhibitors (SNRIs).
    - Duloxetine, venlafaxine and milnacipran.

- Serotonin reuptake inhibitors (SSRIs) **are** not generally useful in the treatment of neuropathic pain. Included in this group of agents are fluvoxamine, citalopram, escitalopram, fluoxetine, sertraline, and paroxetine. While SSRIs are not recommended for treatment of chronic persistent pain, these agents may be considered in those cases in which use of NSAIDs, exercise, manipulation, and a trial of TCAs has proven ineffective.

### **ANTICONVULSANTS:**

- Used to treat neuropathic pain. Anticonvulsants are used for chronic radicular or peripheral nerve pain.
- Length of medication use is indefinite and should be addressed routinely in all chronic pain cases, utilizing the lowest effective doses.
- Carbamazepine, valproic acid, phenytoin, clonazepam, lamotrigine, tiagabine, topiramate, levetiracetam, oxcarbazepine, and zonisamide.
- Pregalbin and gabapentin are used the most widely.
  - Not recommended for use in nonradicular chronic pain.
- Topirimate may be considered as a fourth or fifth line agent in chronic low back pain.

### **BISPHOSPHONATES:**

- Reduce osteoclastic bone activity, with accompanying net gain of bone mass.
- Are used in patients with Chronic Regional Pain Syndrome (CRPS) after failure of NSAIDs and exercise based therapy. However, they are not recommended for chronic pain patients other than those with CRPS.

### **GLUCOCORTICOSTEROIDS:**

- Have been used frequently for acute radicular pain, and for CRPS.
- Use via systemic or topical routes is not recommended for trigger point/myofascial pain, nor are they recommended for use in chronic persistent pain, or nonradicular pain.
- Adverse effects of steroids are well known.

### **CALCITONIN:**

- Hormone secreted by the parafollicular cells of the thyroid gland.
- Treatment option for CRPS patients who remain significantly symptomatic despite a trial of NSAIDs, corticosteroids, active physical therapy, and bisphosphonates.
- Duration of use varies and may be indefinite.
- Has not been shown to be an effective treatment option in other forms of chronic pain.

### **CLONIDINE:**

- Alpha-agonist commonly used as an antihypertensive.
- Has been used in CRPS patients, owing to its impact on nociceptive processing. Also, in those with a history of CRPS, it is used with intravenous regional anesthesia prior to surgery, to minimize the recurrence of CRPS.
- Can potentiate the clinical effect of other medications, reducing cravings associated with serum level fluctuations of other medications, and can be helpful addressing muscle spasms.
- Is not recommended for use in non-CRPS chronic pain patients, although it is used occasionally for epidural injections.

### **HERBAL PREPARATIONS, ALTERNATIVE TREATMENTS:**

- Many complementary or alternative methods are available, including homeopathic, herbal, and naturopathic treatments.
- Use of most of these interventions is not supported by quality evidence of efficacy.

### **DIETARY SUPPLEMENTS, VITAMINS:**

- Generally poor evidence regarding necessity of vitamin or mineral supplementation in normally over-nourished Western societies.
- Vitamin D deficiency may be an exception, as this has been associated with various pain syndromes. When a deficiency of 25-OH-Vitamin D is identified on laboratory testing, supplementation is medically appropriate.

### **GLUCOSAMINE:**

- Has not been shown to improve pain related disability in chronic low back pain.

### **N-methyl-D-aspartate (NMDA) RECEPTOR ANTAGONISTS:**

- Work by blocking receptors of neurotransmitters that are necessary to long-term memories.
- Also thought to assist in preventing acute pain from transitioning into chronic pain, as well as potentially help reduce opioid tolerance and enhance opioid analgesia. As the,
- Dextromethorphan is the most investigated member of this group; useful in select chronic pain patients who have failed a course of NSAIDs, TCAs, as well as anti-convulsant agents, and have a peripheral neuropathy, diabetic or otherwise. They are not, however, recommended for use in other chronic pain patients, or in CRPS cases.

### **SKELETAL MUSCLE RELAXANTS:**

- Many agents comprise this diverse group, designed to effect muscle relaxation through, primarily, CNS effects, not effects on skeletal muscle.
- Includes sedative-hypnotics, tranquilizers, CNS depressants, and neuromuscular blocking agents.
- Due to the high possibility of adverse effects exceeding anticipated beneficial impact, these agents are not recommended for mild to moderate chronic pain, nor for treatment of trigger points/myofascial pain.
- Benefit in CRPS has been insufficiently studied to date.

### **TOPICAL MEDICATIONS:**

- Diverse group, including agents such as patches, sports creams, NSAIDs, dimethyl sulfoxide (DMSO), capsaicin and N-Acetylcysteine (NAC).
- One additional agent in this group, capsaicin, is considered to reduce pain by stimulating nerve fibers removed from the site of pain, these agents are thought to work by distraction.
- A purported benefit is the relatively low incidence of adverse systemic effects.

### **LIDOCAINE PATCHES:**

- Increasingly popular, topical lidocaine patches can be used to treat chronic pain syndromes, including carpal tunnel syndrome and postherpetic neuralgia, when localized pain is present.

### **OPIOIDS:**

- Opioids are potent analgesics, used widely to manage moderate to severe acute pain and pain arising from cancer.
- Use of opioids has increased dramatically in recent years, owing in part to national initiatives for quality improvement mandating assessments and treatment of pain.
- Management of chronic non-malignant pain with long-term, high dose opiates, however, is controversial, and requires a structured program of frequent follow-ups with documentation of improved function and compliance.
- Guidance for use is thoroughly outlined in the State of Rhode Island Department of Health website (<https://health.ri.gov/healthcare/medicine/about/safeopioidprescribing/#pcp>) and use of these agents should be in compliance with the safe opioid prescribing guidelines detailed in that site. Additional guidance is provided by the HHS Guide for Clinicians on the Appropriate Dose Reduction or Discontinuation of Long-Term Opioids ([https://www.hhs.gov/opioids/sites/default/files/2019-10/Dosage\\_Reduction\\_Discontinuation.pdf](https://www.hhs.gov/opioids/sites/default/files/2019-10/Dosage_Reduction_Discontinuation.pdf)). A brief summary of guidelines for chronic pain includes:
  - Those with chronic, persistent pain that is not well-controlled with non-opioid treatment (physical functional restoration, behavior modifications, modalities, non-opioid medications), as evidenced by a lack of functional improvement may benefit. A successful initial opioid trial may form the basis for consideration of longer, ongoing treatment. Initial prescription should not exceed 5 day supply of medications.

- Risk factors requiring close scrutiny include: prior psychological disorder, history of alcohol, and/or drug abuse/dependence, nicotine use, personality disorders or addictive behaviors, depression, COPD, CHF, sleep apnea, history of renal/hepatic dysfunction, and concurrent use of medications such as sedative/hypnotics, benzodiazepines, and/or barbiturates.
- Frequent follow-up visits at every 2 to 4 weeks initially should be scheduled to monitor efficacy, compliance, adverse effects, and surreptitious medical use. A 30% or more reduction in pain with corresponding improvement in function should be documented. If not present, this should warrant strong consideration of cessation of further prescriptions.
- Several common tools can be used to assess opioid treatment and impact on function and pain, including: Graded Chronic Pain Scale, Brief Pain Inventory, Quick Dash, Oswestry Disability Index, and Diagnosis Intractability Risk and Efficacy/DIRE score.
- In addition to the above tools, consideration should also be provided regarding use of a Risk Evaluation and Mitigation Strategy (REMS) drug safety program that the U.S. Food and Drug Administration (FDA) can require for certain medications with serious safety concerns to help ensure the benefits of the medication outweigh its risks).
- Strong consideration of referral to an appropriate pain or addiction specialist, psychologist, or psychiatrist should be exercised, due to degree of complexity involved in assessing and management of chronic pain patients.
- Specialty consultation may be necessary to assist with chronic pain, including identification of undiagnosed conditions (including those of a psychological nature), assistance in pain management, identification of alternative treatments, addiction management, as well as assistance in tapering opioids, methadone treatment, and aberrant behavior management. Consultations do not necessarily equate to transfer of care. Appropriate consultation with American Board of medical specialties certified/eligible physicians can be utilized as part of the ongoing treatment plan. Indications i specialty consultations can include:
  - Ongoing severe pain symptoms without significant functional improvement, or improvement of pain control despite opioid treatment.
  - Persistent pain with minimal or absent underlying tissue pathology, with correlation between the original injury and severity of impairment being unclear.
  - Pain behaviors present, as well as risk behaviors, with unsuccessful improvement with standard treatment measures.
  - Strong evidence of worsening pain behaviors.

- Unusual knowledge of controlled substances.
- Request for specific agents or claims of allergy/ineffectiveness of other medications.
- Demands for assessment/medications after hours.
- Unscheduled reefer requests.
- "Loss" of prescriptions.
- Mood disorder/other psychiatric conditions.
- Drug abuse physical signs.
- No apparent interest in diagnosis, noncompliance with appointments.
- Feigning/exaggeration of physical problems.
- Exertion of pressure, via solicitation of sympathy, guilt, or direct threats on the treating provider(s).
- Subjective complaints exceeding objective findings.
- "Physician firing" after refusal to fill prescriptions.
- No work for more than 6 months with minimal functional improvement with active therapy.

**INAPPROPRIATE TREATMENT OPTIONS:**

- Duplication of services by multiple treating specialists.
- Repeat diagnostic studies without demonstrated symptom change, with accompanying quantitative findings/changes.
- Lack of multidisciplinary approach, including singular use of physical agents/modalities not in the context of a concerted, multitherapeutic approach.

PROTOCOL HISTORY  
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