Evidence-Based Clinical Practice Guidelines for Interdisciplinary Rehabilitation of Chronic Nonmalignant Pain Syndrome Patients

Steven H. Sanders, PhD*; R. Norman Harden, MD†; Peter J. Vicente, PhD‡

*Siskin Hospital’s Center for Pain Rehabilitation, Chattanooga, Tennessee; †Rehabilitation Institute of Chicago Center for Pain Studies, Chicago, Illinois; ‡LoDo Pain and Headache Clinic, Denver, Colorado, U.S.A.

Abstract: This is an update to evidence-based practice guidelines for chronic nonmalignant pain syndrome patients first published in 1995 and revised in 1999. The current guidelines recommend interdisciplinary-focused rehabilitation, which is goal-directed and time-limited. Emphasis is placed on educating patients in active self-management techniques that stress maximizing function. Integrated treatment involving medical, psychological/behavioral, physical/occupational therapy, and disability/vocational interventions are recommended on an outpatient basis whenever clinically possible. Patient selection criteria are delineated. Updated references providing evidence-based support for the recommendations are provided, including the use of opioids and sedative-hypnotic medications, injection and block procedures, acupuncture, implantable spinal infusion and stimulation devices, and other invasive spinal surgery procedures such as intradiscal electrothermal therapy. Guideline integration and early detection and intervention with chronic pain syndrome patients are encouraged.

Key Words: chronic pain, practice guidelines, pain rehabilitation, evidence based

INTRODUCTION

The incidence/prevalence of chronic pain does not appear to be diminishing, and may indeed be increasing.1 Most of these chronic pain patients can be effectively treated in primary or secondary care. Only a small percentage require tertiary care. However, it is this percentage that consumes the vast majority of health care dollars spent for pain and represents the most impaired cases.2 Thus, the need for appropriate evidence-based practice guidelines to effectively treat this most impaired and dysfunctional segment of chronic pain patients continues to be high. This article offers a second evidence-based update to treatment guidelines for chronic nonmalignant pain syndrome patients that were first published in 19953 and revised in 1999.4 Since then, there has been a proliferation of “practice guidelines” focused on chronic pain patients.4-9 Most of these are specific to selected diagnoses or specialty. Fortunately, for this previously underserved population, there has been a great deal of quality research and evidence published since the 1999 revision. The current article incorporates
this new evidence with established research findings as it applies to an interdisciplinary rehabilitation approach.

Development of Practice Guideline Revisions

This revision of the guidelines continues to focus on quality, evidence-supported research published since September 1999 on the integrated application of existing and emerging treatment modalities and technologies to chronic nonmalignant pain syndrome (CPS) patients. As with the 1999 revision, the definition of adequate "evidence" was set high to insure that the current recommendations had substantial, empirical support. This approach is somewhat different from that taken by other practice guidelines. Many use graded levels of evidence, from anecdotal, pilot, retrospective studies, to randomized controlled trials and meta-analytic or systematic reviews. For this article uncontrolled, nonrandomized, and nonprospective studies were not considered adequate evidence to support or reject a given recommendation. Specifically, as in prior versions, adequate evidence was defined as "...the presence of at least two well designed prospective, controlled outcome studies demonstrating effectiveness with at least 200 chronic pain patients, including CPS patients. For a given study to be considered, it had to demonstrate at least a prospective, control research design using quantifiable, objective outcome measures, including function." Prospective, randomized, controlled trials were given the highest weight. Likewise, adequate evidence was assumed from one or more quality meta-analyses demonstrating effectiveness, or an objective, criterion-based systematic review of existing literature, which included the minimum number of prospective controlled outcome studies, as noted above. The research review process included Medline, Psych Scan, MedWeb, Cochrane Collaboration Reviews, other practice guidelines published since September 1999, and major textbooks on assessment and treatment of chronic pain patients. There is no attempt here to review and comment on the myriad of procedures that have been applied to the treatment of chronic nonmalignant pain. This guideline focuses on those interventions for which credible evidence exists and appropriate annotations on those which are most frequently employed despite a dearth of such evidence.

Definition and Conceptual Importance of the CPS Patient

Definition. The need to promulgate a current definition of a CPS is obvious. Procedures that are effective for the management of acute pain may not be appropriate for chronic pain patients, and the complexity of CPS generally requires more intensive, multidisciplinary treatment. The following operational definition is updated from the 1999 guideline version. It is predicated on consistency with this prior version, clinical characteristics of patients treated in the reviewed, empirical literature, the AMA permanent impairment guides, and various other guidelines and standards that bear on the comprehensive treatment of patients with chronic nonmalignant pain conditions.

Thus, CPS is defined as: any set of behaviors that:

1. involves the complaint of enduring or recurring pain;
2. has persisted longer than typical for an associated condition, or is associated with an intermittent or chronic disease process;
3. has responded inadequately to appropriate medical and/or invasive care; and
4. is associated with significant and reliable impairment of functional status.

Chronic nonmalignant pain syndrome patients may also demonstrate significant mood disturbance and/or anger—hostility, but these are not considered as necessary to make a diagnosis.

Clinical Importance. Some may call into question the clinical need to maintain such a concept as the “Chronic Pain Syndrome.” It might be seen as irrelevant, obsolete, and/or inconsistent with current practice and billing nomenclature, which are limited to biomedical classification schemes of patients along pathophysiological/etiological grounds (ie, myofascial, neuropathic, etc.). The prevalence of such classification systems has evolved primarily in response to billing and insurance needs, or as traditional models for pharmaceutical research. The American Medical Association’s International Classification of Disease (9th Revision) (ICD-9) dominates the practice landscape regarding classification schemes of patients along pathophysiological/etiological grounds (ie, myofascial, neuropathic, etc.). The prevalence of such classification systems has evolved primarily in response to billing and insurance needs, or as traditional models for pharmaceutical research. The American Medical Association’s International Classification of Disease (9th Revision) (ICD-9) dominates the practice landscape regarding classification for physical, procedure, and pharmacological treatment recommendations. Nowhere to be found in the ICD categorization scheme is a generic CPS definition. Such a biopsychosocial definition and categorization model is based on psychological/behavioral and functional criteria, as well as biomedical ones. This model provides a conceptual and pragmatic framework for the comprehensive experience and expression inherent in chronic pain.
to effectively understand and treat most chronic pain patients it is important to look at functional, psychological/behavioral, and sociological conceptual models, such as the one defined here. Models using medical classification alone are inadequate to capture the human chronic pain experience and clinical presentation. Indeed, research has clearly demonstrated the presence of psychological/behavioral subgroups of chronic pain patients within and between medical diagnostic categories. Likewise, these various psychologically/behaviorally based subgroups appear to respond differently to individual and interdisciplinary pain rehabilitation interventions. Thus, the current CPS concept and definition have significant clinical implications over and above any limited biomedical classification. Indeed, identification of these “high-risk patients” can lead to major improvement in treatment matching, efficacy, and cost.

Diagnostic and Related Issues
As stated, the ICD-9 does not include a diagnostic category for CPS patients. Thus, this article will continue to recommend use of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV); Pain Disorders, diagnostic nomenclature with its subgroups for clinical delineation of CPS patients. (See the 1999 revision for detailed discussion of this categorization). The issue of using a psychiatric diagnosis for CPS patients continues to be controversial and without any agreed-upon resolution to date. Repeating the 1999 revision position, the proposed solution would be “the development of a recognized broader based biopsychosocial diagnostic coding system.” While recognition of this type of broad-based conceptual model is becoming more prevalent in mainstream medicine, its translation into significant revisions in the ICD-9 coding system is unlikely to occur in the immediate future.

Application of Practice Guidelines
The current revision continues to recommend applying these practice guidelines to all CPS patients generically whenever possible. Application is appropriate across various biomedically categorized painful conditions (eg, low back pain, headaches, neuropathic pain). Until more research demonstrates efficacy, the current guidelines should not be applied to patients with acute or subacute pain or pain due to cancer. Likewise, they may not be applicable to those patients experiencing chronic pain who do not meet the operational CPS criteria. It is recommended that they be used whenever possible within organized pain treatment programs, as well as by primary and secondary care practitioners for the treatment of CPS patients.

GENERAL PRACTICE GUIDELINES

Treatment Goals
Treatment objectives for CPS patients have been variously specified in the empirical literature and recommended in numerous clinical guidelines and standards. Consistent with these, the treatment goals, as relevant for each case, should include:

1. improvement of physical function (eg, increase range of motion, standing, walking);
2. improvement of general functional status (eg, increase activities of daily living, social—recreational activities, home—domestic activities);
3. increase in self-management of the CPS;
4. improvement of vocational/disability status (eg, return to work, start job training; start classes);
5. reduction/discontinuation of opiate and sedative-hypnotic medications;
6. reduction of health care utilization for the CPS (eg, reduce medical procedures, inpatient admissions, outpatient office visits); and
7. reduction of pain level (eg, reduce visual analog scale scores, verbal rating scores, verbal descriptor scores).

The current guidelines continue to emphasize increasing patients’ level of function and ability to self-manage their pain and related problems. While reduction of pain level is a goal, the other goals should be actively pursued even if no reduction in pain level occurs. The current goals also continue to focus on reducing/eliminating nonindicated medications or use of unproven technologies. As subsequent sections will confirm, this goal is still consistent with current scientific evidence, in spite of the fact that it may be inconsistent with current common medical practice. Given that by definition the CPS patient is vulnerable and at increased risk, guidelines must be conservative, and designed to protect against dangerous and unproven interventions of any kind; thus goals (5) and (6) are important ones for CPS patients.

Achieving these goals can be quite challenging in light of current practice trends. The trend shows a significant increase in the frequency and potency of opioid and other potentially problematic medications and/or a
variety of unproven expensive technical modalities across a variety of different biomedically based pain categories such as low back pain, neuropathic pain, and headaches. In spite of this and in keeping with an evidence-based approach to guideline application and goals, limiting the predominant use and focus on pharmacological and procedural methods with the CPS patient is both clinically appropriate, necessary, and important as part of a successful rehabilitation intervention for this patient group.

Clinical Evaluation
The current guidelines recommend that CPS patients be evaluated by health care professionals with specialized training in chronic pain management (see Commission on Accreditation of Rehabilitation Facilities [CARF] for specific delineation of training requirements). The initial evaluation should be performed by a qualify physician and psychologist. The content of these medical and psychological evaluations needs to include a detailed medical and psychological/behavioral history, review of all clinical records and diagnostic data, and thorough physical and behavioral psychological examinations by the appropriate professionals. The physician and psychologist can determine the need to order additional tests and consult other specialists for evaluation and recommendations contingent upon findings of the initial evaluation. The evaluations should provide a manifest explanation for the etiology and maintenance of patients’ clinical problems. Patients’ working diagnoses, appropriateness for treatment, basic treatment plan, and initial goals should be set by the initial evaluation team, with input and agreement obtained from the patient before treatment begins.

For those patients who are accepted and agree to treatment, a physical function evaluation should be completed. This should include neurological, musculoskeletal, and activities of daily living functional assessments by physical and/or occupational therapists trained in these evaluations and pain rehabilitation. If CPS patients have a work-related injury, a realistic goal of returning to work, or pending disability issues, an evaluation of their occupational and functional capacities should be performed at the end of initial treatment.

It is recommended that the clinical treatment team meet regularly to discuss patients’ response to and progress in the rehabilitation program. Likewise, ongoing treatment revisions should occur as needed to reach as many of the treatment goals as possible.

Treatment
Since the 1999 revision, there have been a number of very important studies and systematic reviews of the scientific literature on treatment approaches for patients with chronic pain, including CPS patients. The evidence continues to accumulate that the most effective treatment for CPS patients is found within an integrated interdisciplinary pain rehabilitation program. Services need to be provided by a coherent team of health care professionals with specialized training in pain rehabilitation and management, with patients receiving coordinated care across disciplines. The focus of care continues to be on achieving as many realistic treatment goals as possible, with ongoing interaction and participation by all relevant health care professionals, patients, and their families whenever possible.

Chronic nonmalignant pain syndrome patients should be accepted for treatment if there is indication that significant improvement in at least four treatment goals is achievable. For those patients where responsiveness is not clear, it is recommended that they be given a 2- to 5-day treatment trial, with assessment regarding initial responsiveness, compliance, motivation, and any kinds of initial treatment gains. If the initial response is promising, the remainder of the treatment plan can be implemented. If these patients show no initial responsiveness or poor compliance, a change of treatment plan may be warranted. If this does not stimulate appropriate progress, they should be given feedback and an opportunity to improve over the next two to three actual treatment days. If they comply, such patients can be maintained in the program. If not, they can be discharged from the program. The current status and reason for early discharge should be clearly documented and communicated.

Primary Treatment Modalities
This section reviews and makes recommendations about various treatment modalities that have demonstrated evidence, as defined herein, of effectiveness either alone or in combination within an integrated interdisciplinary treatment approach. Likewise, some common and emerging modalities and technologies with insufficient evidence are reviewed. When recommended, a treatment should be available to CPS patients within an integrated pain rehabilitation program as their clinical condition warrants.
**Medication Management.** The research literature continues to provide increasing evidence that antidepressant medications can be beneficial for some CPS patients. While antidepressants can be useful for symptomatic treatment of some CPS patients, there is no evidence that functional change is associated with such treatment. Likewise, selective serotonin reuptake inhibitors (SSRIs) have not been associated with any clinical benefit when chronic back pain is the presenting complaint. Also, evidence continues to grow demonstrating that the tricyclic antidepressants and certain anticonvulsant medications can significantly reduce the subjective pain experience in neuropathic based pain. Thus, these medications are recommended for application to CPS patients, as their clinical condition would indicate. The American Pain Society (APS) has now published an updated *Principles of Analgesic Use, Fifth Edition,* which offers more detailed instruction on the proper application and dosing for these types of medications.

Evidence also continues to accumulate supporting certain medications with CPS patients suffering from primary migraine headache. There are useful and appropriate listings and guidelines for application of various medications for migraine headache disseminated by the American Medical Association. More recent evidence and guidelines have been endorsed by the American Academy of Neurology. The evidence in these guidelines supports the systematic palliative or prophylactic use of nonsteroidal anti-inflammatory, ergotamine, anti-emetic, serotonin receptor agonist, tricyclic antidepressant, angiotensin-converting enzyme inhibitor, beta-adrenergic blocker, calcium channel blocker, and anticonvulsant medications. It is recommended that when indicated these medications, as delineated in the referenced guidelines, be applied to CPS patients suffering from migraines.

Since the 1999 revision, there has been a great deal more scrutiny, and to some extent more science, studying the long-term effects of opioid-based medications with chronic pain patients, including CPS patients. In addition, more concerns have been raised and researched regarding the long-term effects of chronic opioid usage on baseline sensitivity to painful stimuli, immune system responding, and hormonal reactivity. Recent research has demonstrated that chronic opioid usage can sensitize pain reactions, as well as impair immune and hormonal responses. Although the actual clinical translation of this research has yet to be done, it does raise some additional concerns about long-term chronic opioid usage.

While there has been an increase in studies attempting to demonstrate the empirical efficacy of long-term opioid therapy with chronic pain patients, the research is still inadequate. Researchers are beginning to look at chronic application of oral and transdermal opioids using better-controlled research designs; however, thus far, they lack the specified scientific rigor as persuasive evidence. Most research in this area has been characterized by nonrandom designs, significant dropout rates, only short-term outcomes, lack of objective or functional progress, or samples of patients with ongoing disease who would not necessarily demonstrate a CPS as defined here. Other studies have similarly failed to demonstrate opioid-related improvement in function. At this time there are no randomized controlled, long-term trials or other appropriate experimental evidence demonstrating improvement in function or other objective measures associated with opioid usage in noncancer CPS populations. In addition, without considering issues of addiction or dependency, some studies have found a significant increase in “problem drug behavior” with regular usage (eg, dose violations, lost prescriptions, multisourcing; see Saper et al.).

Given the continued lack of quality research and the growing concerns about the increasing frequency and abuse of opioid prescriptions, the current guidelines still do not recommend the use of opioid medications with CPS patients. Since the 1999 revision, there has also been no substantial evidence supporting the routine use of sedative-hypnotic medications with these patients either. Thus, this drug classification is also not recommended. If opioids or sedative-hypnotics are used, it should be on a very time-limited basis (10 to 15 days, which is also the duration most chronic pain programs consume to withdraw such medications; see Rome et al.). Also consistent with prior guidelines, if other published guidelines are employed in rationalizing long-term opioid or sedative-hypnotic medication usage with select CPS patients, there should be clear evidence that the patient is not demonstrating significant impairment, such medication application produces a clinically meaningful increase in function, and the benefits and any clinical problems are frequently reassessed.

The current guidelines continue to recommend that patients demonstrating primary alcohol or other substance abuse dependency on nonprescribed substances should be treated separately for these issues before...
attempting to actively participate in an interdisciplinary chronic pain rehabilitation program. When patients with a history of substance abuse are found to be dependent on prescribed medications, it is often a manifestation of such a disorder. In such cases, a pain management program may be provided concurrently with appropriate recovery therapies.

**Physical and Occupational Therapy.** The scientific literature continues to accumulate and support, at least for CPS low back pain patients, the need to receive active physical and/or occupational therapy. Research findings indicate that the focus of physical and occupational therapies should be on helping patients learn awareness of body mechanics and dynamic posture, initiation and activation of a long-term exercise program to gradually increase general fitness, strength, coordination and a range of flexibility and motion, postural and muscle balance, as well as specific physical coping strategies.\(^4,19,20\) Passive treatment methods, such as transcutaneous electrical nerve stimulation (TENS), ultrasound, and heat and ice, should only be used in a secondary supportive role if they facilitate the patient’s ability to increase fitness, strength, and range of motion.\(^65-68\) Activity and/or job specific occupational therapy interventions should be used when appropriate, along with therapeutic recreation and sleep hygiene for those patients showing impairments in these areas.\(^17,64\) Long-term goals for physical and occupational therapy should be to develop independently applied exercise and physical management programs the patient can use and continue long after active treatment has been completed.

**Behavioral/Psychological Therapies.** The research literature continues to provide a strong evidence basis for the importance and need for behavioral/psychological treatment as essential to the CPS patients’ interdisciplinary pain rehabilitation.\(^4,19,20\) If significant depression or anxiety is present, CPS patients need psychological/behavioral treatment, as well as appropriate pharmacological interventions for these symptoms. Comorbid psychological/psychiatric conditions (eg, post-traumatic stress disorder, social adjustment issues, etc.) should also be treated when present. There is convincing evidence that CPS patients should receive and have access to stress management training, relaxation training, cognitive behavioral therapy, operant therapy, and biofeedback as their condition warrants.\(^69,70\) These treatment methods should be applied in a coordinated fashion at the individual or group level as a core part of the pain rehabilitation program.

**Vocational Rehabilitation and Disability Management.** Dealing with vocational and disability issues remains important for many CPS patients, as it is axiomatic that participating in meaningful function and gainful work are the ultimate rehabilitation goals for many patients. Recommendations are for a focus on optimizing function, including return to work when possible. When there is a return to work question and/or need for information regarding disability, job site analysis, job-specific reconditioning, and functional capacity assessments should be pursued within the context of the program.

**Adjunctive Treatment Modalities**

**Trigger Point and Botox Injections, Prolotherapy, Nerve Blocks, and Acupuncture.** There has been an increasing use of trigger point and botox injections for CPS patients over the last 5 years. This is in spite of a lack of any convincing quality evidence that either of these techniques work for this patient population.\(^61-76\) Thus, as with earlier guidelines, these methods are not recommended for use with CPS patients.

Over the last several years, there has also been the introduction and increased use of an injection procedure known as prolotherapy. This involves injecting a mixture of glucose and an anesthetic into ligaments, primarily for low back patients. The hypothesis is that this causes scarification and a “tightening” of areas of ligamentous laxity. A recent Cochran review\(^77,78\) identified four quality studies examining the efficacy of this technique with chronic low back patients. The findings reviewed failed to yield consistent support for prolotherapy with this patient group. Likewise, the actual number of CPS patients across these studies appeared to be relatively small. Thus, prolotherapy is not recommended for use with CPS patients.

The use of epidural nerve blockade, particularly for low back pain patients, remains high in the United States.\(^79\) Unfortunately, the evidence supporting such clinical application has not increased and/or improved since the 1999 revision. While there are several studies showing the possibility for some transient/short-term benefit,\(^80\) the scope and quality of evidence is still, at best, marginal.\(^81\) Therefore, such blocks, as well as sympathetic blockage,\(^79\) are not recommended for CPS patients.
As the 1995 and 1999 guidelines have strongly recommended, if nerve blockade is considered with CPS patients, it should not be used in isolation and have an upper limit number of six. Blocks should be applied only if such treatment results in significant improvement in subjective pain and function for more than just several weeks. Despite growing use, there is currently no demonstration of the utility of using epidural steroid or facet joint injections in the course of a multidisciplinary pain management program; and such therapies are not recommended in this context.

Acupuncture also continues to be used with CPS patients within the current health care marketplace. There has also been an increase in scientific scrutiny regarding the actual efficacy of this particular therapy. There is some controversy regarding the proper control methodology to conduct quality-randomized studies and some recent limited support for the application of acupuncture on neck and shoulder pain. Nevertheless, the vast majority of studies to date continue to show little to no clinically significant improvement over time for acupuncture applied to CPS patients. Thus, acupuncture also cannot be recommended for use with CPS patients.

More Invasive Medical Procedures

Implantable Infusion Pumps and Spine Stimulation Devices. Studies and systematic reviews regarding the efficacy of infusion pumps and spinal cord stimulators have increased. Thus far, they have not met the current criteria for adequate supportive evidence to recommend application to CPS patients. A recent study by Thimineur et al. highlights the lack of quality research and efficacy of such devices. These authors studied the clinical efficacy of intrathecal opioid pumps on a small number of chronic, nonmalignant pain patients. While it is not clear whether any of these were “CPS” patients, this study did have somewhat better research design integrity. The authors used a control group and obtained 3-year follow-up data. However, the control group was not randomized. It consisted of patients who had not responded well to an initial trial with the intrathecal opioid pump or could not participate because of other reasons. While they found that the patients who received the pump therapy showed significantly more improvement in mood, subjective pain levels, and self-report functional measures, the actual level of pain and dysfunction remained extremely high. Thus, while there was some improvement, it was not clinically significant. A lack of evidence for clinically meaningful improvement from spinal cord stimulators is similarly found. Given the continued absence of quality research showing consistent and clinically significant evidence, the current guidelines do not recommend using implantable infusion pumps or spinal cord stimulators with CPS patients.

Radiofrequency Denervation, Intradiscal Electrothermal Therapy, and Spine Surgery. Application of radiofrequency denervation techniques for chronic back pain is also on the rise. While there are a number of uncontrolled and single-group studies, the research literature to date is of poor quality and does not support usage with CPS patients. Therefore, this technique is not recommended. Intradiscal electrothermal therapy (IDET) for back pain has also increased in usage. Likewise, the research studying (IDET) is of poor quality. Thus, although growing in use and popularity, IDET is not recommended for CPS patients.

There is increasing evidence that with certain back pain patients, spine surgery is indicated and can be quite effective. However, the evidence is still very weak regarding application to CPS patients. Indeed, some studies and reviews have demonstrated that nonsurgical methods with low back pain can be just as effective as surgical interventions. Therefore, the current guidelines recommend that spinal surgery be avoided with CPS patients with the following exceptions: presence of a new lesion, significant neurological deficit or progression, or clinically significant spine instability.

Treatment Intensity and Timing

The literature continues to support outpatient treatment for CPS patients whenever possible along a continuum of care based on patients’ conditions and needs. Consistent with effective treatment outcome studies, is recommended that an upper limit of 20 total treatment days for the CPS patients continues to be applied in most cases. Obviously, this upper limit may need to be extended based on the specific documented outcomes and goals for given treatment program. When more than 20 treatment days are proposed, a clear rationale and specified extension should be documented. The number of recommended therapies in any given modality is uncertain and should be individually assessed based on objective improvement.

Also consistent with effective treatment outcome studies, CPS patients should be followed for at
least 3 months after clinical care has been completed. If possible, 6- to 12-month follow-up is preferable, but sometimes not feasible. This should be an interdisciplinary team follow-up approach to help the patient make necessary revisions in any home-based protocols leading toward more independence and achievement of as many of the outcome goals as possible. This follow-up phase should be time-limited with the obvious goal of reducing any ongoing dependency on the interdisciplinary team and services.

For chronic pain patients in general, and CPS patients in particular, the research literature continues to support early intervention whenever possible. Almost all of this research has been performed on back pain patients, and is consistent enough to warrant an additional recommendation. Specifically, it is recommended that for low back pain patients interdisciplinary assessment and treatment be applied as early as possible in the process of chronic pain development, although the intensity and duration of treatment will be notably

![Figure 1](image_url)
and proportionately less than for CPS patients. This growing body of research supports the real possibility of moving more toward secondary preventative strategies with CPS patients. Obviously, if applied in a more generalized fashion, it could lead to major improvement in clinical efficacy, with this very difficult patient population.

GUIDELINE SUMMARY
To further enhance application and usage, Figure 1 depicts a summary algorithm of the current guidelines. The algorithm provides a useful reference for defining the CPS patient, clinical treatment goals, criteria to accept a CPS patient for interdisciplinary pain rehabilitation, the content and focus of pain rehabilitation, and follow-up recommendations. The figure highlights the specificity of the current guidelines as applying to CPS patients. While patients with chronic pain not meeting the CPS criteria may benefit from part or all of the recommendations summarized in Figure 1, application to this non-CPS patient population should be determined on a case-by-case basis in the context of the clinical presentation and needs of the patient.

GUIDELINE UPDATE AND FUTURE DEVELOPMENT
The ongoing and increasing research literature dictates that these guidelines be updated at least every 4 years or sooner if significant additional evidence occurs. Only through such ongoing scrutiny can the current guidelines remain as a viable, useful tool for clinicians treating CPS patients.

As the 1999 revision noted, there continues to be a need for quality research. This is particularly true in the areas of long-term opioid and sedative-hypnotic use, as well as all of the adjunctive treatment modalities and technologies outlined in the current guidelines. The need for more research regarding treatment intensity, patient characteristics and matching treatments, and application of these guidelines to non-low back pain CPS patients remains high. Likewise, recent research identifying and using risk factors for early detection of CPS needs more attention.

With the increasing number of treatment guidelines being developed and promoted, the concept of integrating them may be unrealistic. In spite of this, it is still worth pursuing. Specifically, the current guidelines should be incorporated within other ones that include CPS patients whenever possible. Irrespective of any eventual integration of these guidelines with others, they remain important as possibly the strongest evidence-based approach to help this very difficult patient population.

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