



Complete Summary

GUIDELINE TITLE

Assessment and management of chronic pain.

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Jul. 84 p. [171 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Institute for Clinical Systems Improvement (ICSI). Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Mar. 87 p. [157 references]

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [December 12, 2007, Carbamazepine](#): The U.S. Food and Drug Administration (FDA) has provided recommendations for screening that should be performed on specific patient populations before starting treatment with carbamazepine.

COMPLETE SUMMARY CONTENT

** REGULATORY ALERT **

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

SCOPE

DISEASE/CONDITION(S)

Chronic pain

Note: Chronic pain is defined as persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well-being, level of function, and quality of life.

GUIDELINE CATEGORY

Evaluation
Management
Rehabilitation
Treatment

CLINICAL SPECIALTY

Anesthesiology
Family Practice
Internal Medicine
Neurology
Pediatrics
Physical Medicine and Rehabilitation
Psychology
Surgery

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Nurses
Occupational Therapists
Patients
Pharmacists
Physical Therapists
Physician Assistants
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

- To improve the function of adult patients with chronic pain

- To improve the assessment and reassessment of adult patients with chronic pain utilizing the biopsychosocial model
- To improve the appropriate use of Level I and Level II treatment approaches for adult patients with chronic pain
- To improve the effective use of non-opioid medications in the treatment of adult patients with chronic pain
- To improve the effective use of opioid medications in the treatment of adult patients with chronic pain

TARGET POPULATION

Physiologically mature adolescents (between 16–18 years) and adults with chronic pain

This guideline can be applied to pediatric population where noted. This guideline is not intended for the treatment of patients with migraine headaches, cancer pain, advanced cancer pain, or in the context of palliative care or end-of-life management.

INTERVENTIONS AND PRACTICES CONSIDERED

Assessment/Evaluation

1. History and physical examination, including musculoskeletal and neurologic examination
2. Diagnostic testing if needed including x-rays, computed tomography (CT), magnetic resonance imaging (MRI), electromyography, and nerve conduction
3. Assessment of pain and function using various assessment tools
4. Determining biological mechanism of pain (neuropathic, muscle, inflammatory, or mechanical/compressive)
5. Other assessments
 - Work and disability issues
 - Psychological and spiritual assessment
 - Contributing factors and barriers
6. Level I diagnostic procedures (sacroiliac joint injection, transforaminal epidural injection, discography)

Management/Rehabilitation/Treatment

1. General management including developing plan of care and setting realistic goals
2. Physical rehabilitation with functional goals
3. Psychosocial management with functional goals
 - Cognitive-behavioral interventions, including relaxation and cognitive therapies
 - Cultural, age, gender and spirituality influences
4. Pharmacologic management including
 - Non-opioid analgesics such as acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs)

- Opioids
 - Tricyclic antidepressants (TCAs)
 - Other non-tricyclic antidepressants
 - Anticonvulsant or antiepileptic drugs
 - Topical agents
 - Muscle relaxants and antispasmodics
 - Anxiolytics
 - Drugs for insomnia
5. Level I therapeutic procedures including
- Facet joint injection
 - Percutaneous radiofrequency neurotomy
 - Intradiscal electrothermal therapy
 - Epidural corticosteroid injections
 - Vertebroplasty and kyphoplasty
 - Trigger point injections
6. Complementary management including
- Acupuncture
 - Herbal products, such as Devil's Claw, dimethyl sulfoxide (DMSO), feverfew, and Willow Bark
7. Level II management including
- Referral to an interdisciplinary team and pain specialist
 - Surgery
 - Palliative interventions (nucleoplasty, spinal cord stimulation, intrathecal medication delivery systems, multidisciplinary pain rehabilitation)

MAJOR OUTCOMES CONSIDERED

- Effect of treatment on chronic pain
- Role of psychological factors in chronic pain
- Barriers to treatment of chronic pain

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A literature search of clinical trials, meta-analysis, and systematic reviews is performed.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Key conclusions (as determined by the work group) are supported by a conclusion grading worksheet that summarizes the important studies pertaining to the conclusion. Individual studies are classed according to the system presented below, and are designated as positive, negative, or neutral to reflect the study quality.

Conclusion Grades:

Grade I: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

Grade II: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

Grade Not Assignable: There is no evidence available that directly supports or refutes the conclusion.

Study Quality Designations:

The quality of the primary research reports and systematic reviews are designated in the following ways on the conclusion grading worksheets:

Positive: indicates that the report or review has clearly addressed issues of inclusion/exclusion, bias, generalizability, and data collection and analysis.

Negative: indicates that these issues (inclusion/exclusion, bias, generalizability, and data collection and analysis) have not been adequately addressed.

Neutral: indicates that the report or review is neither exceptionally strong nor exceptionally weak.

Not Applicable: indicates that the report is not a primary reference or a systematic review and therefore the quality has not been assessed.

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Non-randomized trial with concurrent or historical controls
- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

New Guideline Development Process

A new guideline, order set, and protocol is developed by a 6- to 12-member work group that includes physicians, nurses, pharmacists, other healthcare professionals relevant to the topic, along with an Institute for Clinical Systems Improvement (ICSI) staff facilitator. Ordinarily, one of the physicians will be the leader. Most work group members are recruited from ICSI member organizations, but if there is expertise not represented by ICSI members, 1 or 2 members may be recruited from medical groups or hospitals outside of ICSI.

The work group will meet for seven to eight three-hour meetings to develop the guideline. A literature search and review is performed and the work group members, under the coordination of the ICSI staff facilitator, develop the algorithm and write the annotations and footnotes and literature citations.

Once the final draft copy of the guideline is developed, the guideline goes to the ICSI members for critical review.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost-analyses.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Critical Review Process

Every newly developed guideline or a guideline with significant change is sent to the Institute for Clinical Systems Improvement (ICSI) members for Critical Review. The purpose of critical review is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the guideline. Critical review also provides an opportunity for clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes necessary across systems in their organization to implement the guideline.

All member organizations are expected to respond to critical review guidelines. Critical review of guidelines is a criterion for continued membership within the ICSI.

After the critical review period, the guideline work group reconvenes to review the comments and make changes, as appropriate. The work group prepares a written response to all comments.

Approval

Each guideline, order set, and protocol is approved by the appropriate steering committee. There is one steering committee each for Respiratory, Cardiovascular, Women's Health, and Preventive Services. The Committee for Evidence-based Practice approves guidelines, order sets, and protocols not associated with a particular category. The steering committees review and approve each guideline based on the following:

- Member comments have been addressed reasonably.
- There is consensus among all ICSI member organizations on the content of the document.
- Within the knowledge of the reviewer, the scientific recommendations within the document are current.
- Either a critical review has been carried out, or to the extent of the knowledge of the reviewer, the changes proposed are sufficiently familiar and sufficiently agreed upon by the users that a new round of critical review is not needed.

Once the guideline, order set, or protocol has been approved, it is posted on the ICSI Web site and released to members for use. Guidelines, order sets, and protocols are reviewed regularly and revised, if warranted.

Revision Process of Existing Guidelines

ICSI scientific documents are revised every 12 to 36 months as indicated by changes in clinical practice and literature. Every 6 months, ICSI checks with the work group to determine if there have been changes in the literature significant enough to cause the document to be revised earlier than scheduled.

Prior to the work group convening to revise the document, ICSI members are asked to review the document and submit comments. During revision, a literature search of clinical trials, meta-analysis, and systematic reviews is performed and reviewed by the work group. The work group will meet for 1-2 three-hour

meetings to review the literature, respond to member organization comments, and revise the document as appropriate.

If there are changes or additions to the document that would be unfamiliar or unacceptable to member organizations, it is sent to members to review prior to going to the appropriate steering committee for approval.

Review and Comment Process

ICSI members are asked to review and submit comments for every guideline, order set, and protocol prior to the work group convening to revise the document.

The purpose of the Review and Comment process is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the order set and protocol. Review and Comment also provides an opportunity for clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes needed across systems in their organization to implement the guideline.

All member organizations are encouraged to provide feedback on order sets and protocol; however, responding to Review and Comment is not a criterion for continued membership within ICSI.

After the Review and Comment period, the work group reconvenes to review the comments and make changes as appropriate. The work group prepares a written response to all comments.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical Systems Improvement (ICSI): For a description of what has changed since the previous version of this guidance, refer to [Summary of Changes Report– July 2008](#).

The recommendations for the assessment and management of chronic pain are presented in the form of two algorithms with 25 components, accompanied by detailed annotations. Algorithms are provided for [Assessment](#) and [Management](#). Clinical highlights and selected annotations (numbered to correspond with the algorithm) follow.

Class of evidence (A-D, M, R, X) and conclusion grade (I-III, Not Assignable) definitions are repeated at the end of the "Major Recommendations" field. See also "Management of Chronic Pain: Evidence Grid" on page 3 of the original guideline document for summary of evidence cited in the guideline regarding level I and II treatment of chronic pain.

Clinical Highlights

- Chronic pain assessment should include determining the mechanisms of pain through documentation of pain location, intensity, quality and onset/duration; functional ability and goals; and psychological/social factors such as depression or substance abuse. (*Annotations #2, 3, 12; Aim #2*)
- The goal of treatment is an emphasis on improving function through the development of long-term self-management skills including fitness and a healthy lifestyle. (*Annotation #14, Aim #1*)
- A patient-centered, multi-factorial, comprehensive care plan is necessary, one that includes addressing biopsychosocial factors. Addressing spiritual and cultural issues is also important. It is important to have a multidisciplinary team approach coordinated by the primary care physician to lead a team including specialty areas of psychology and physical rehabilitation. (*Annotation #14, Aim #3*)
- Level I treatment approaches should be implemented as first steps toward rehabilitation before Level II treatments are considered. (*Annotation #14; Aim #3*)
- Medications are not the sole focus of treatment in managing pain and should be used when needed to meet overall goals of therapy in conjunction with other treatment modalities. (*Annotations #14, 19; Aims #4, 5*)
- Careful patient selection and close monitoring of all non-malignant pain patients on chronic opioids is necessary to assess the effectiveness and watch for signs of misuse or aberrant behavior. (*Annotation #19; Aim #5*)

Assessment Algorithm Annotations

2. Critical First Step: Assessment

Key Points:

- All patients have the right to an adequate pain assessment including documentation of pain location, intensity, quality, onset/duration/variations/rhythms, manner of expressing pain, pain relief, what makes it worse, effects of pain, and a pain plan.
- A general history and physical exam are essential for assessment of chronic pain.
- Baseline functional ability assessment can provide objectively verifiable information about a patient's quality of life and ability to participate in normal life activities.

All patients have the right to an adequate pain assessment including documentation of pain location, intensity, quality, onset/duration/variations/rhythms, manner of expressing pain, pain relief, what makes it worse, effects of pain, and a pain plan. The plan should include pain assessment tools that are appropriate for the individual, with self-report being the primary source, which includes the facilitation of regular reassessment and follow-up according to criteria developed by the individual organization.

In the evaluation of the patient with chronic pain it is essential to perform a good general history and physical examination of the patient. In addition, certain areas deserve specific attention.

The history of the chronic pain patient may be very revealing and helpful. Carefully identifying the onset and progression of the problem may help to focus how a problem developed from localized pain to a more generalized or multifocal pain experience for the patient. For example, a patient who develops a low back injury may go on to develop neck and upper limb symptoms as well. The history should also include the location, quality, intensity (such as on a visual analog scale), duration, aggravating and relieving factors of the pain. This can also include responses to and enumeration of prior treatments. Some inquiry of sleep and diet are also helpful.

It is essential also to elicit any history of depression or other psychopathology that may affect the perception of pain [B, D]. Past or current physical, sexual, or emotional abuse is also an important factor. A history of chemical dependency is of interest in this patient population. Also see Annotation #12, "Other Assessment", below and in the original guideline document.

Chronic pain frequently involves the musculoskeletal system and the nervous system, especially the spine and its contents. These areas should be examined more carefully and with attention to possible generators of pain relative to the patient's history.

Musculoskeletal: Observe for obvious deformity or atrophy. If atrophy is suspected, it should be measured. Asymmetry of the iliac crests can be a sign of sacroiliac joint pathology. Scoliosis per se is usually not a cause of pain.

Cyanosis or pallor of an extremity is also useful information as is asymmetry of limb temperature. Examine posture gait and station. Range of motion of the spine does not correlate well with pathology. It has more significance in peripheral joint pathology. Involved joints should be examined for signs of effusion, instability, and ligament or cartilage pathology. Palpation for areas of spasm or tenderness and for identification of trigger points is useful [C].

Neurological: Some brief assessment of mental status is appropriate. Patients with significant cognitive or language function impairment will be much more challenging to treat. Much of the identifiable findings in chronic pain patients will be referable to the peripheral nervous system. Therefore careful evaluation of muscle strength, sensation, and muscle stretch reflexes is important. Findings of allodynia (sensitivity to a non-noxious stimulus like light touch or rubbing) and hyperalgesia are useful in any pain syndrome. Signs and symptoms of upper motor neuron dysfunction will provide clues to the existence of potentially painful conditions such as multiple sclerosis or myelopathy due to cervical spinal stenosis. Patients with hemiplegia or hemiparesis may present with central type pain syndromes.

Diagnostic Testing

There is no diagnostic test for chronic pain. It is important to remember that finding pathology on diagnostic tests does not necessarily prove that the identified pathology is causing the patient's pain. Nevertheless, diagnostic testing is useful in chronic pain patients for helping to direct treatment and referral.

Plain radiography is helpful in musculoskeletal pain to rule out pathology that might require more immediate attention (e.g., an unrecognized fracture or mass lesion). Dynamic x-rays of the spine are helpful in ruling out significant segmental instability.

Magnetic resonance imaging (MRI) and computed tomography (CT) are used very frequently, especially in spine-related pain. MRI is usually preferred for evaluating disc pathology. There are no good data to support or refute the use of MRI in chronic pain of musculoskeletal origin. Some general information about MRI in the spine and pain is important in interpreting these studies. Bulging discs are usually not significant in the absence of spinal stenosis. Disc degeneration and arthritic changes per se are not necessarily painful. The size of a disc protrusion does not correlate with pain level. Most pain physicians like to have this information when evaluating the patient, especially if some anesthesiologic intervention is contemplated for the pain. CT and CT myelography are useful in patients who cannot undergo MRI or who are being considered for surgery. Electromyography and nerve conduction studies are of use in patients suspected of having lower motor neuron dysfunction, nerve or nerve root pathology, or myopathy [R].

Functional Assessment

Many patients with chronic pain have significant losses in ability to perform normal life activities. Baseline functional ability assessment can provide objectively verifiable information about a patient's quality of life and ability to participate in normal life activities. This information may then be used for:

- Identifying significant areas of impairment or disability
- Establishing specific functional outcome goals within a care plan
- Measuring the effectiveness of the care plan or treatment interventions

Standardized assessment tools are available. Personalized goal setting, such as regaining ability to perform a specific job task, hobby, or family activity, may also be used.

Pain Assessment Tools

Patient self report is the "most reliable indicator of the existence and intensity of pain" (National Institutes of Health) and is a key component of chronic pain assessment. Tools to assess chronic pain should:

- Be appropriate to the person regardless of age, race, creed, socioeconomic status and psychological or emotional background
- Include a multidimensional scale since chronic pain affects a person's entire being [C]
- Address location, quality, sensory characteristics, intensity, duration, aggravating and alleviating factors, variability, and predictability
- Be used early in the process of patient evaluation

Refer to the original guideline document for more information on the following topics: multi dimensional assessment tools, single dimensional assessment

tools, patients with barriers to communications that can affect assessment, and a general approach to use of pain assessment tools in chronic pain.

3. **Determine Biological Mechanisms of Pain**

There are many ways to classify types of pain. Based on consensus, the work group found it most helpful to classify this guideline by the following four types: neuropathic, inflammatory, muscle, and mechanical/compressive.

It is important to determine which of these mechanisms are at work in the chronic pain patient because the treatments depend on the type of pain. Two decades ago, the type of pain was not so important because all pain was treated in a similar way with a very narrow scope of drugs and therapies – basically non-steroidal anti-inflammatory drugs (NSAIDs), Tylenol, and sometimes opioids. There are now available mechanism-specific treatments for neuropathic pain, inflammatory pain, bone pain, and muscle dysfunction.

Remember that patients often will present with pain that has more than one mechanism. The clinician should determine the relative contribution of each mechanism to the total pain condition and devise treatment strategies to address the relevant mechanisms [R].

4. **Neuropathic Pain**

Neuropathic pain is pain produced by damage or dysfunction of the nervous system. Examples include sciatica from nerve root compression, diabetic peripheral neuropathy, trigeminal neuralgia, and postherpetic neuralgia. The clinical features are: the setting, the distribution, the character of the pain and the physical examination findings. The clinical setting is usually the first clue to neuropathic pain. A diabetic who complains of persistent pain is likely to have neuropathic pain since about 50% of diabetics develop neuropathy-related pain. A patient who develops pain after a stroke in the same territory is most likely having post stroke neuropathic pain. The character of neuropathic pain is usually described as burning or shooting/stabbing. If the pain follows a nerve distribution (e.g., median nerve for carpal tunnel syndrome), neuropathic pain should be considered. Other examples are stocking-glove distribution for peripheral neuropathy; trigeminal distribution for trigeminal neuralgia and dermatomal distribution for postherpetic neuralgia. The physical findings to look for with neuropathic pain are numbness in the pain territory, sensitivity to a non-noxious stimulus like light touch or rubbing (*allodynia*), or coolness of the skin in the pain territory (sympathetically mediated pain).

5. **Muscle Pain**

Skeletal muscle pain is a common cause of chronic pain. Fibromyalgia syndrome and myofascial pain syndrome are frequent diagnoses in pain clinics. Failure to properly diagnose muscle pain may result in poor treatment outcome, delayed recovery, and ineffective, unnecessary surgery.

Fibromyalgia symptoms and myofascial pain syndrome are common chronic musculoskeletal disorders, although many consider fibromyalgia syndrome to be a disorder of the central nervous system. Both syndromes are commonly diagnosed in pain clinics. Both are controversial, because the cause of each is unknown. Extensive literature exists regarding diagnosis and treatment, but few randomized controlled studies have been done, so scientific evidence is meager [M].

Fibromyalgia syndrome and myofascial pain syndrome both result in sore, stiff, aching, painful muscles and soft tissues. Both syndromes share other symptoms including fatigue, poor sleep, depression, headaches, and irritable bowel syndrome. Occasional acute muscle pain is probably universal. Chronic muscle pain is extremely common. Most are able to function satisfactorily in daily activities despite chronic muscle pain. Some report pain-related disability and present a challenge to the health care system.

Fibromyalgia syndrome is characterized by widespread musculoskeletal aching, stiffness, and tenderness. It is one of the most common pain clinic diagnoses.

The American College of Rheumatology Criteria for Classification of fibromyalgia include:

- Widespread pain (trunk and upper/lower extremities)
- Pain in 11/18 tender spots
- Pain present for at least three months
- Other symptoms that are chronic but not diagnostic including insomnia, depression, stress, fatigue, irritable bowel syndrome [C]

Myofascial pain is regional muscle soft tissue pain commonly involving the neck, shoulders, arms, low back, hips, and lower extremities. Trigger points refer pain. Myofascial pain is common in patients seen in pain clinics. Etiology, diagnosis, and management are controversial.

6. Inflammatory Pain

Inflammatory pain such as arthritis, infection, tissue injury, and postoperative pain is also known as *nociceptive pain* because the inflammatory chemicals such as prostaglandins directly stimulate primary sensory nerves that carry pain information to the spinal cord. The clinical features include heat, redness, and swelling at the pain site and a history of injury or known inflammation.

7. Mechanical/Compression Pain

Mechanical pain is aggravated by activity and temporarily relieved by rest. Neck and back pain are commonly related to muscle/ligament strain sprain, degeneration of disks or facets, or osteoporosis with compression fractures [R].

Mechanical/compressive pain is also a type of nociceptive pain because mechanical pressure or stretching directly stimulates the pain sensitive neurons. In this setting, the history and radiological findings usually tell the story. Examples include fracture, obstruction, dislocation, or compression of tissue by tumor, cyst, or bony structure. The treatment will usually require some sort of decompression or stabilization.

8. **Is Pain Chronic?**

Chronic pain is defined as persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well-being, level of function, and quality of life [R]. If the patient has not been previously evaluated, attempt to differentiate between untreated acute pain and ongoing chronic pain. If a patient's pain has persisted for six weeks (or longer than the anticipated healing time), a thorough evaluation for the cause of the chronic pain is warranted.

See also the NGC summary of the ICSI guideline [Assessment and Management of Acute Pain](#).

11. **Specialty Involvement**

Possible correctable causes of pain should be evaluated by the appropriate medical/surgical consultant for evaluation and, if indicated, appropriate correctable treatment.

Involvement of a pain specialist in the care of a patient with chronic pain occurs optimally when the specialist assumes a role of consultation, with the primary care provider continuing to facilitate the overall management of the patient's pain program. It is recommended that the primary care provider receive regular communications from the pain specialist and continue visits with the patient on a regular schedule, even if the patient is involved in a comprehensive management program at a center for chronic pain. The primary care provider should not expect that a consulting pain specialist will assume primary care of a patient unless there has been an explicit conversation in that regard between the consultant and the primary care provider. This is particularly true in regard to the prescribing of opioids: the primary care provider should expect to continue as the prescribing provider, and ensure the responsible use of the opioids through contracts, urine toxicology screens, etc. (the exception to this may occur with the admission of the patient into an opioid tracking program). Conversely, the consulting pain specialist should not initiate opioids without the knowledge and consent of the primary care provider.

12. **Other Assessment**

Key Points:

- Tools to assess chronic pain should be appropriate to the person, include a multidimensional scale and be used early in the process of patient evaluation.

- Identification and management of comorbid psychological disorders will facilitate appropriate biopsychosocial care.
- A comprehensive pain assessment begins with a determination of the biological type of pain, followed by a listing of contributing factors and barriers to treatment.

Functional Assessment Tools

A variety of assessment tools have been used in the medical literature for measuring, estimating, or describing aspects of a patient's functional ability. These tools often also include measures of pain perception and psychological status as well as function.

- Palliative Performance Scale (Karnofsky Scale) (see the NGC summary of the ICSI guideline [Palliative Care](#))
- Oswestry Low Back Disability Index (see the NGC summary of the ICSI guideline [Adult Low Back Pain](#))
- 36-item Short Form Health Survey (SF-36)
- U.S. Department of Labor Physical Demand Table
- American Pain Foundation Scale (adapted from Oken, M.M.)

These tools all have limitations, including difficulties with administration and scoring, disease- or condition-specific design or failure to provide clinically useful information, which have probably contributed to a lack of widespread clinical use.

See Appendix C in the original guideline document for an example functional ability questionnaire.

Psychological Assessment

Determine possible psychiatric contribution to clinical presentation.

Assessment questions to ask the patient:

- Are you depressed or anxious?
- Are you under any psychiatric care?
- Do you have a history of substance abuse?
- Do you have a history of verbal, physical, or sexual abuse?

Refer to the original guideline document for additional information on the following topics:

- Role of psychological assessment including depression, anxiety, substance abuse and dependence, CAGE-AID questionnaire, sleep disorders, personality disorders, and history of abuse
- Coping patterns and resources
- Spirituality
- Work and disability issues
- Contributing factors and barriers to treatment

Management Algorithm Annotations

14. Level I Core Principles

Key Points:

- A written plan of care using the biopsychosocial model is the essential tool for ensuring a comprehensive approach to treatment of a patient with chronic pain.
- All patients with chronic pain should participate in an exercise fitness program to improve function and fitness.
- A cognitive behavioral approach with functional restoration may reduce pain and will improve function.
- The presence of psychological difficulties should in no way invalidate a patient's complaint of pain nor should it eliminate the possibility that a general medical condition may also be present that is causing the pain.
- The medical decision-making for treatment of chronic pain needs an understanding of the patient's ethnic and cultural background, age, gender and spirituality in order to work with the patient's chronic pain symptomatology.
- Self-management insures active patient participation in the care plan and is essential.

Plan of Care Using Biopsychosocial Model

A written plan of care is the essential tool for ensuring a comprehensive approach to treatment of a patient with chronic pain. To maximize the success of treatment, a care plan must address the whole person in all of his/her complexity, including physical and biologic factors, psychological state and beliefs, as well as the family, social, and work environment (biopsychosocial model). To do this, it is important to have a multidisciplinary team approach coordinated by the primary care physician to lead a team including specialty areas of psychology and physical rehabilitation.

A plan of care for all patients with chronic pain should address all of the following five major elements:

- Set personal goals
- Improve sleep
- Increase physical activity
- Manage stress
- Decrease pain

Specific and measurable goals and clearly described specific treatment elements give patients a framework for restructuring a life that has often been significantly altered by chronic pain. Failure to improve pain and function when a patient is following the plan of care should lead to changes of the plan. Failure to follow a plan of care should lead to addressing barriers and further evaluation of stressors, psychosocial factors, or motivations.

See Appendix D, "Personal Care Plan for Chronic Pain" in the original guideline document for an example care plan.

It is important that realistic goals be set with patients early on regarding the potential benefits of treatment.

Patient Focus Group Feedback

It appears that limited education is done early on and patients do a lot of research on their own. Education is critical and includes setting realistic goals, providing education to patients about their disease state, explaining medications and also any interventional procedures. Well-informed patients will be able to take more self-responsibility for their care.

Other patient focus group key points include:

- Be aware that the term chronic pain may elicit a highly emotional response. Patients may feel discouraged that the pain will never go away despite their hope a cure will be found.
- Although patients would like a quick fix to their pain, frustration occurs when interventions that only provide temporary relief are found or utilized.
- Patients want to be included in the treatment plan. They are often proactive in seeking ways to alleviate or eliminate their pain. They may see several types of physicians and may have also tried to find relief from their pain in additional varieties of ways. **Teamwork and empathetic listening in the development of a treatment plan is critical.**
- When the physician acknowledges that chronic pain affects the whole person and really listens, patients are more likely to be open to learning how to live by managing their pain versus curing their pain.
- Most patients want to return to a normal routine of completing activities of daily living, (e.g., playing with children/grandchildren, going for a walk, and working within their limitations). The focus should be on improving function.
- Many patients have utilized a variety of interventions including medications and complementary therapies.

Level I versus Level II Management

The treatment approaches described in this algorithm for the management of chronic pain are divided into two levels. Level I treatment encompasses the standard approaches to the treatment of chronic pain including pharmacologic management, intervention management, non-pharmacologic management, and complementary medicine management. These treatment approaches should be implemented as first steps towards rehabilitation before Level II treatments are considered. Level II treatment includes referral for multidisciplinary pain rehabilitation or surgery for placement of a spinal cord stimulator or intrathecal pump. Level II treatment may be effective intervention for chronic pain patients who have failed more conservative treatment options. Level II treatments are designed for the most complex and challenging chronic pain patients. The treatment options included in Level II

are expensive and require a significant investment on the part of the patient to be effective with either level of management. This should ideally be coordinated by the primary care provider.

Physical Rehabilitation with Functional Goals

Rehabilitation/Functional Management

Managing pain and restoring function are basic goals in helping the patient with chronic pain.

- Use a multidimensional inventory to rate average severity of the last weeks' pain and monitor progress.
- Use a functional activities tool to document pain-related disability (inability to function in normal manner) and monitor progress [R].
- Determine baseline fitness, then set specific fitness goals with a gradual graded fitness program [A].

Physical rehabilitation is essential for the patient with chronic pain because most are significantly deconditioned. Focus on specific goals to restore function.

Self-management insures active patient participation and includes:

- A graded gradually progressive exercise program, and
- Psychosocial management (i.e., cognitive behavioral therapy)

Encourage overall fitness, activity, and a healthy lifestyle.

Fitness includes:

- Endurance activities (aerobic, e.g., walking)
- Strengthening
- Balance activities
- Flexibility

Passive modalities (transcutaneous electrical nerve stimulation [TENS], ultrasound, massage, corsets, traction, acupuncture) should be limited and used only with an active exercise program. Patients should be taught self-management treatments to help manage pain (use of ice, heat, massage, relaxation, cognitive behavioral) [R].

Biopsychosocial rehabilitation with functional restoration reduces pain and improves function. Self-management ensures active patient participation in managing pain and achieving reasonable goals of functional restoration.

Conclusion: All patients with chronic pain should participate in a physical activity program to improve function and fitness. Self-management insures active patient participation in the care plan and is essential.

Refer to the original guideline document for more information on rehabilitation/functional management.

Psychosocial Management with Functional Goals

Chronic pain is frequently associated with psychological problems and even comorbid psychiatric diagnoses. The presence of psychological difficulties should in no way invalidate a patient's complaint of pain nor should it eliminate the possibility that a general medical condition may also be present that is causing the pain. If psychological difficulties or psychiatric comorbidities are found, the patient's treatment plan should include specific steps to address them.

Depression

A high percentage of patients with chronic pain have co-existing depression. In 2004, data were examined from primary care centers world-wide by the World Health Organization. They found that 22% of all primary care patients suffer from chronic debilitating pain. Further, they found that chronic pain patients were four times more likely to have comorbid depressive disorder than pain-free primary care patients [R]. The findings also showed that the more diffuse the pain complaints, the greater the risk of depression and the bigger impact on quality of life.

If depression in a chronic pain patient is severe or comorbid major depressive disorder is present in a patient with chronic pain (see the NGC summary of the ICSI guideline [Major Depression in Adults in Primary Care](#)), it is important to note that such patients are at increased risk of suicide [C], [D]. Specifically assess if patient has considered harming him/herself or made plans to kill him/herself. If suicidal thoughts are present, assess whether patient has a concrete plan for self-harm; assess if they have the means to carry out the plan; and assess lethality of the plan. Suicidal risk is higher in individuals who are struggling with substance use/abuse, because judgment can be impaired. Past suicide attempt(s) increase risk of future attempts.

See also Annotation #12, "Other Assessment" above and in the original guideline document and Annotation #19, "Level I Other Management" below for more information on substance use/abuse.

If suicidality and/or major depressive disorder is present in the context of chronic pain, get psychiatric consultation immediately, because of risk of suicide. Also, management of chronic pain and work towards rehabilitation goals is not possible when severe depression is present. If comorbid major depressive disorder is diagnosed concurrently with chronic pain, depressive symptoms should be the primary focus of treatment. In those patients with either pain or depressive symptoms, assess both domains. Depression may be more than a facet of chronic pain when significant depression symptoms are present. If comorbidity is found between chronic pain and **mild to moderate** major depression, treat both conditions for optimal outcomes [M]. If comorbid **severe** major depressive disorder is diagnosed concurrently with chronic pain, depressive symptoms should be the primary focus of treatment.

Some symptoms of depression including feelings of helplessness, dysphoria, and frustration are generally expected in patients suffering from chronic pain given the impact pain often has on ability to function and enjoy life. If targeted intervention can improve level of physical functioning and quality of life, mild depressive symptoms will likely improve without specific intervention.

Cognitive-Behavior Therapy

Cognitive-behavioral approaches to the rehabilitation of patients with persistent and unremitting chronic pain are considered to be among the most helpful available. Patients may be referred to a cognitive-behavioral therapist, counselor, social worker, or psychologist for treatment. However, there are many cognitive-behavioral steps that can be implemented by primary care physicians within the busy structure of their practice to assist their patients towards rehabilitation [R].

Patients live in environments that exert powerful reinforcement for certain behaviors. Physicians, by their very role as health care providers, are powerful reinforcers of behavior. By changing the contingencies of reinforcement, patients can make gains towards significant rehabilitation goals with the help of their physicians. The goals of cognitive-behavioral strategies in the management of chronic pain are to improve physical functioning, assist patients in returning to work, reduce disability, reduce pain-related fear/avoidance, and reduce psychological distress and depression [R].

Cognitive-Behavioral Strategies for Primary Care Physicians

There are a number of cognitive-behavioral strategies that primary care providers can utilize to help their patients manage chronic pain.

- Tell the patient that chronic pain is a complicated problem and for successful rehabilitation, a team of health care providers is needed. Chronic pain can affect sleep, mood, levels of strength and fitness, ability to work, family members, and many other aspects of a person's life. Treatment often includes components of stress management, physical exercise, relaxation therapy and more to help them regain function and improve the quality of their lives.
- Let the patient know you believe that the pain is real and is not in his/her head. Let the patient know that the focus of your work together will be the management of his/her pain. ICSI Patient Focus Group feedback included patient concerns that their provider did not believe them/their child when they reported pain.
- Ask the patient to take an active role in the management of his/her pain. Research shows that patients who take an active role in their treatment experience less pain-related disability [D].
- Avoid telling patients to "let pain be their guide," whether it is stopping activity because of pain or taking medications or rest in response to pain.
- Prescribe time-contingent pain medications, not pain medications "as needed." Time-contingent medications allow a disruption in the

associations between pain behavior and pain medication. The powerfully reinforcing properties of pain medicines are then not contingent upon high levels of pain and pain behavior.

- Schedule return visits on a regular schedule and don't let the appointments be driven by increasing levels of pain. Physicians are powerful reinforcers, too.
- Reinforce wellness behaviors such as increased activity or participation in an exercise program.
- Enlist the family and other supports to reinforce gains made towards improved functioning, too.
- Have patient involved in an exercise program or structured physical therapy.
- Assist the patient in returning to work. Do this in a step-wise fashion that is not dependent on level of pain.
- Fear of movement or fear of pain due to movement is a significant concern for many chronic pain patients. Inactivity or avoidance of movement leads to physical deconditioning and disability. Try not to rely on sedative or hypnotic medications to treat the fear many chronic patients show of activity or fear of increased pain. When chronic pain patients expose themselves to the activities that they fear, which simply means when they do the things they have been afraid of and avoiding, significant reductions are observed in fear, anxiety, and even pain level [A]. If patients' fears are excessive, relaxation strategies may be helpful or referral for more formal and intensive cognitive-behavioral therapy may be necessary.

Refer to the original guideline document for information on the following topics:

- Cognitive-behavioral interventions including relaxation therapies and cognitive techniques
- Culture and chronic pain
- Age and chronic pain
- Gender and chronic pain
- Spirituality and chronic pain

15. Level I Management: Neuropathic Pain

The first principle guiding any therapy is to eliminate the underlying causes of pain to the greatest possible extent with disease-specific measures [R]. For example, better diabetes management should minimize the complications of diabetes, including pain. Chemotherapy or surgery that reduces tumor bulk will decrease pain caused by a tumor that is compressing nerve roots.

Symptomatic pain control can take the form of local or regional interventions, including nerve blocks, topical agents, or physical rehabilitative measures. In addition, systemic therapies can be applied, such as drug therapies or behavioral techniques that reduce pain.

See Appendix H, "Pharmaceutical Interventions for Neuropathic Pain" and Appendix I, "Neuropathic Pain Treatment Diagram" in the original guideline document.

Local or Regional Therapies

Topical therapies can be applied to localized peripheral tissues to reduce pain without significant systemic effects. Topical capsaicin applied three or four times per day can deplete substance P from local C-polymodal nociceptors and reduce pathological pain. It has been studied in diabetic neuropathy [A] and postherpetic neuralgia [R]. Preparations of topical lidocaine in the form of a cream or a patch have also been used for relief of localized neuropathic pain syndromes [A]. Transcutaneous electrical nerve stimulation and other stimulation-based therapies can provide temporary relief in some cases of neuropathic pain caused by nerve root or plexus lesions, but such therapies may also be irritating, particularly when allodynia is present. In such cases, application of the stimulating electrode in adjacent, uninvolved dermatomes may be effective.

Drug Therapies for Neuropathic Pain

See also Annotation #19, "Level I Other Management: Pharmacologic" below.

Among the many drugs used to manage neuropathic pain, gabapentin has growing acceptance among pain specialists and neurologists as a first-choice treatment. Gabapentin has recently proved effective in postherpetic neuralgia and diabetic neuropathy in multicenter controlled trials [A]. Its favorable side effect profile and paucity of adverse interactions with other drugs contribute to its widespread use in neuropathic pain. Since excretion of the drug is virtually 100% renal, the dose and frequency of administration is reduced in patients with renal insufficiency. Pregabalin, a neuromodulator-like gabapentin that regulates the alpha2delta subunit of the voltage-gated calcium channels, is U.S. Food and Drug Administration (FDA) approved. It has been shown to be effective in postherpetic neuralgia and diabetic peripheral neuropathy in randomized controlled multicenter trials [A]. Pregabalin is indicated for treatment of diabetic neuropathy and postherpetic neuralgia. Oxcarbazepine is chemically similar to carbamazepine and may have benefits in the treatment of neuropathic pain, including trigeminal neuralgia and diabetic neuropathy.

Other anticonvulsants have been utilized in neuropathic pain with variable success. Carbamazepine is still considered a good initial choice for idiopathic trigeminal neuralgia, but there is a lack of evidence of consistent success in other pain states. One study demonstrated efficacy of carbamazepine for diabetic peripheral neuropathy compared with nortriptyline-fluphenazine [A]. Newer anticonvulsants are beginning to be investigated for their neuromodulating effects on various non-epileptic conditions such as mood, behavior, and pain. Among these drugs are topiramate, lamotrigine, oxcarbazepine, and tiagabine. Some preliminary studies have indicated a possible role for lamotrigine in trigeminal neuralgia [A], painful human immunodeficiency virus (HIV)-associated neuropathy [A], and complex regional pain syndrome type I [D]. Clonazepam, a benzodiazepine, is used by many providers for nocturnally predominant pain.

Tricyclic antidepressants (amitriptyline, nortriptyline, desipramine, imipramine, and others) continue to hold a prominent place in the

management of a broad range of pain disorders, including neuropathic pain. Their mechanism of action is believed to involve potentiation of descending inhibitory pathways, especially at the level of the lower brainstem. Among the large number of controlled and uncontrolled studies, two comparative trials have demonstrated superior efficacy for amitriptyline or desipramine over fluoxetine or lorazepam in diabetic neuropathy and postherpetic neuralgia [A]. These trials showed that the effect of the tricyclic antidepressant on pain was independent of its effect on depression. A screening electrocardiogram is recommended for elderly patients and others at risk of the conduction delay that these drugs can cause.

Corticosteroids have a beneficial effect on neuropathic pain, probably through multiple mechanisms, including membrane stabilization and anti-inflammatory effects. Corticosteroids may be useful for short-term control of neuropathic radicular pain caused by tumor edema, tumor invading bone, and acute or subacute disc herniation.

Although most opioids are not known to exert antineuropathic pain effects, they are nevertheless potent analgesics. They have a role in reliable patients when other measures fail. Careful patient selection is critical to success with long-term opioid therapy. Two opioids, methadone and tramadol, may be more effective than others in neuropathic pain.

Refer to the original guideline document for more information.

16. Level I Management: Muscle Pain

Screen for serious medical pathology and screen for psychological and social factors that may delay recovery.

Scientific evidence of the effectiveness of treatment is lacking. Well-designed studies need to be done.

Use a numeric pain rating and functional scale to determine severity of pain disability.

Use a biopsychosocial interdisciplinary team approach with a cognitive-behavioral component encouraging exercise and active participation of the patient in the plan of care [R].

A graded exercise program starting within baseline and gradually increasing in a time-contingent manner works best.

Physical Rehabilitation

- Fitness program
 - Gentle graded strength
 - Cardiovascular
 - Flexibility
 - Balance
- Body mechanics

- Modalities
 - Ice/heat
 - Massage
 - Self-management
- Aquatic therapy

Behavioral Management

- Depression/stress
- Relaxation techniques
- Cognitive behavioral
- Chemical dependency
- Anger management
- Biofeedback

Drug Therapy

- Pain and sleep
 - Tricyclic antidepressants (nortriptyline low dose)
 - Cyclobenzaprine (short term)
- Depression and pain
 - Duloxetine
- **Opioids rarely needed** [C]

Refer to the original guideline document for more information.

17. Level I Management: Inflammatory Pain

Screen for serious medical pathology and screen for psychological and social factors that may delay recovery.

Use a numerical pain rating and functional scale to assess severity of pain related disability.

Use a biopsychosocial interdisciplinary team approach with cognitive-behavioral component encouraging exercise and active participation of the patient in the plan of care [R].

Physical Rehabilitation

- Graded fitness program
 - Graded strengthening
 - Cardiovascular
 - Flexibility
 - Balance
- Body mechanics
- Modalities
 - Ice/heat
 - Massage
 - Self-management
- Aquatic therapy

Behavioral Management

- Depression/stress
- Relaxation techniques
- Cognitive behavioral
- Chemical dependency
- Anger management
- Biofeedback
- Coping

Drug Therapy

- Pain and sleep
 - Tricyclic antidepressants (nortriptyline low dose)
 - Cyclobenzaprine (short term)
- Depression and pain
 - Duloxetine
- **Opioids rarely needed [C]**
- NSAIDs
- Immunologic drugs
- Other antidepressants

Refer to the original guideline document for more information.

18. Level I Management: Mechanical/Compressive Pain

Screen for serious underlying medical or neurological pathology and refer to appropriate specialist if indicated.

Screen for biopsychosocial and vocational factors that may delay recovery such as depression, stress, work injury, personal injury, fear avoidance, substance abuse, or severe deconditioning [R].

Screen for degree of pain using the numerical rating scale (0-10).

Screen for degree of disability using a disability rating scale.

- Patients with low degree of pain and low disability may benefit from simple evidence-based exercises and cognitive behavioral counseling.
- Patients with high level of pain and high degree of disability require a more comprehensive approach including a multidisciplinary team with coordinated philosophy, evidence-based exercise, and more intensive psychosocial assessment and management [R].

Use a biopsychosocial team approach:

Physical Rehabilitation

- Graded fitness program
 - Strengthening
 - Cardiovascular

- Flexibility
- Balance
- Body mechanics
- Modalities
 - Ice/heat
 - Massage
 - Self-management
- Aquatic therapy

Behavioral Management

- Depression/stress
- Relaxation techniques
- Cognitive behavioral
- Chemical dependency
- Anger management
- Biofeedback

Drug Therapy

- Pain and sleep
 - Tricyclic antidepressants
 - Nortriptyline low dose
- Antidepressants
- Depression and pain
- **Opioids rarely needed [C]**
- NSAIDs

Conclusions

- All patients with chronic mechanical pain should have a screen for serious underlying medical and neurological pathology.
- Assess for psychological social factors that may contribute to delayed recovery.
- Utilize biopsychological social interdisciplinary team approach using cognitive behavioral therapies to encourage functional activity and exercise.
- Self-management ensures active patient participation in managing pain and reaching reasonable functional goals.

Teach self-management and measure outcome using pain rating and a function tool.

Refer to the original guideline for additional information.

19. Level I Other Management

Pharmacologic Management

Key Points:

- A thorough medication history is critical to the development of an effective treatment plan.
- Define the goals of therapy before prescribing, and tailor medications to meet the individual goals of each patient.
- Identify and treat specific source(s) of pain, and base the initial choice of medication(s) on the severity and type of pain.
- Patients need to know that whether prescribed or non-prescribed, all drugs have risks and benefits. Watch for and manage side effects.
- For opioid therapy:
 - Use caution before starting a patient on long-term opioid therapy
 - Follow the 4 A's (Analgesia, Adverse drug reactions, Activity, Adherence) [R]
 - The work group recommends the use of a written opioid agreement for patients anticipated to be on long-term therapy. See Appendix F in the original guideline document for an example of an opioid agreement form.

Medications are not the sole focus of treatment in managing pain. They should be used when needed to meet overall goals of therapy in conjunction with other treatment modalities: psychosocial and spiritual management, rehab and functional management, non-pharmacologic and complementary medicine, and intervention management. Pharmacotherapy may include agents to treat specific types of pain, such as neuropathic pain, or adjunctive therapies to treat other comorbidities such as depression and anxiety. Use of medications therefore should be directed not just towards pain relief, but increasing function and restoring overall quality of life.

The basic elements to include anytime opioids are used are a diagnosis, a care plan, regular visits with the physician, follow-up, and documentation. See the Federation of State Medical Boards at: <http://www.fsmb.org> for complete information.

General Principles for Pharmacologic Management [R]

- A thorough medication history is critical to the development of an effective treatment plan.
 - Include use of over-the counter drugs and herbals and other supplements.
 - Look for drug related fears and misconceptions, as they may lead to poor compliance with a therapeutic regimen. Differentiate between tolerance, physical dependence, and addiction. See "Definitions" in the original guideline document.
- Define the goals of therapy before prescribing, and tailor medications to meet the individual goals of each patient.
- Identify and treat specific source(s) of pain, and base the initial choice of medication(s) on the severity and type of pain.
 - Types include neuropathic, muscular, inflammatory, and mechanical/ compressive pain. See Annotations #15-18 above.
 - Give drugs an adequate therapeutic trial. When treating inflammatory or neuropathic pain, benefits may take weeks or longer to appear.

- Patients need to know that whether prescribed or non-prescribed, all drugs have risks and benefits. Watch for and manage side effects.
- Select an appropriate drug based on:
 - Characteristics of the agent (onset, duration, available routes of administration, dosing intervals, side effects). The least invasive route of administration is preferred; it's generally oral.
 - Patient factors (age, co-existing diseases, other medications, and response to previous treatments).
- Establish a pain management plan that may include the addition of other drugs: non-opioid, plus opioid, plus adjuvant analgesics when indicated.
 - Rational poly-pharmacy may include the use of two or more drugs with complementary mechanisms of action that may provide greater pain relief with less toxicity and lower doses of each drug.
 - Avoid prescribing two drugs in the same class at the same time.
 - Be alert for possible interactions with other medication the patient is taking or additive side effects.
- Titrate doses to achieve optimal balance between analgesic benefit, side effects, and functional improvement.
 - Some medications require gradual upward titration to achieve optimal analgesia and to minimize adverse effects.
 - Optimize administration of analgesics. Generally, better pain control is obtained with regularly scheduled doses and supplemented with as-needed doses for breakthrough pain.
- Taper and discontinue drugs that don't meet treatment goals. If a drug does not produce the desired therapeutic outcome, there is no need to continue it. This practice helps to prevent expensive and potentially dangerous poly-pharmacy.

Non-Opioid Analgesics

Non-opioid analgesics to consider for use in the treatment of chronic pain include acetaminophen and NSAIDs.

Acetaminophen is an analgesic that may be used initially for the treatment of mild chronic pain or to supplement other agents in treating mild to moderate pain. It lacks anti-inflammatory effects, but is generally well tolerated at therapeutic doses. It does not damage the gastric mucosa but may have chronic renal or hepatic adverse effects [R]. Dosage should be restricted to a maximum of 4 grams per 24 hours, including acetaminophen contained in combination opioid products such as hydrocodone with acetaminophen. Acetaminophen should be used cautiously or avoided in patients with liver impairment.

NSAIDs

NSAIDs are indicated for the treatment of mild to moderate inflammatory or non-neuropathic pain. All NSAIDs inhibit the enzyme cyclooxygenase (COX) inhibiting prostaglandin synthesis. The COX-2 inhibitor celecoxib appears to have fewer gastrointestinal side effects.

However, high dose, long-term use of COX-2 agents has a higher rate of cardiovascular adverse effects. Recent reports indicate that cardiovascular adverse effects are not limited to the COX-2 agents alone [*Not Assignable*].

- All NSAIDs have gastrointestinal (GI) risks of gastritis and possible bleeding. Risk benefits should be weighed especially when treating elderly patients or those at higher risk for GI adverse effects. Consider using in combination with the gastroprotective agent misoprostol or a proton pump inhibitor.
- Use with caution in patients with coagulopathies or thrombocytopenia and those at risk for bleeding.
- Chronic NSAID use increases the risk of renal insufficiency, especially those with diabetes, and patients should be monitored for signs of reduced renal function.
- Ketorolac should not be used for longer than five days and therefore is not an appropriate choice of NSAID in the treatment of chronic pain.
- NSAIDs have significant opioid dose-sparing properties and in turn may reduce opioid-related side effects.
- Monitor all NSAID use including patient use of non-prescription drugs to prevent duplication of therapy and adverse effects.

Opioids

When is it appropriate to use opioids?

Prior to consideration of opioid use for the patient with chronic pain, a thorough evaluation as recommended in this document, should have been completed. If the ethical imperative to relieve pain requires opioid therapy prior to such a thorough evaluation, precede using good clinical judgement.

It is appropriate to consider opioid therapy for patients with persistent moderate to severe pain in the following circumstances:

- Clinical evidence suggests opioids are likely to be effective in neuropathic pain that is not responsive to initial therapies (tricyclic anti-depressants [TCAs] or gabapentin). Opioids are rarely beneficial in the treatment of inflammatory or mechanical/compressive pain and are not indicated for chronic use in treatment of headache (see the NGC summary of the ICSI guideline [Diagnosis and Treatment of Headache](#)).
- Opioids have an equal or better therapeutic index than alternative therapies.
- The medical risk of opioid therapy is relatively low.
- The patient is likely to be responsible in using the drug.
- Opioid therapy is considered part of the overall management for the pain syndrome.

Physicians should not feel compelled to prescribe opioids or any drug if it is against their honest judgment or if they feel uncomfortable prescribing the drug. Before prescribing an opioid, the work group recommends using the DIRE tool to determine a patient's appropriateness for long-term opioid management (see Appendix E in the original guideline document). Other

opioid assessment tools include Webster's Opioid Risk Tool, the Screener and Opioid Assessment for Patients in Pain (SOAPP®), and the Current Opioid Misuse Measure (COMM™).

Patients should give informed consent before the start of opioid therapy and the consent discussion should be documented in the medical record. This discussion should include the low risk of opioid addiction in patients under a physician's care, the necessity of adherence to prescribed dosing, the potential for cognitive impairment when taking the drug alone and/or in combination with sedative/hypnotics, and the likelihood that physical dependence will occur [R].

The Four A's

The goal of opioid therapy is to provide partial analgesia, and maintain or improve function with acceptable side effects. (Four A's: Analgesia, Adverse drug effects, Activity, Adherence) [R].

At each patient visit, the assessment should specifically address these goals (with clear documentation of the 4 A's in the patient's medical record):

- Comfort (degree of analgesia)
- Opioid-related side effects
- Functional status (physical and psychosocial)
- Existence of aberrant drug-related behaviors

Substance Abuse

Patients should be carefully screened for risk of diversion or abuse. The following behaviors suggest relative contraindications to opioid use. With these patients, referral to pain or addiction specialist is advisable [R]:

- History of substance abuse or prior prescription drug misuse
- Unsanctioned dose escalations on several occasions
- Non-adherence to other recommendations for pain therapy
- Unwillingness or inability to comply with treatment plan
- Social instability
- Unwillingness to adjust at-risk activities resulting in serious re-injury requiring additional opioid prescriptions

Random drug screens are one tool to monitor compliance with the opioid regimen. Random urine drug screens are used: (1) To check for diversion, seeking evidence the patient is taking the medication being prescribed; (2) To check for drugs of abuse; and (3) To test for the presence of the prescribed drug. Any evidence of street drug use indicates non-compliance with the opioid contract. The patient's opioids are tapered and he or she is referred to a chemical dependence specialist or treatment program. Primary care physicians need to be aware of the limits of a drug screen. Other useful tools include periodic pill counts or consultation with an addiction medicine specialist.

Evidence of aberrant drug-related behaviors must be carefully assessed. In some cases tapering and discontinuation of opioid therapy will be necessary. Other patients may appropriately continue therapy if the structure for monitoring is tightened. Consideration should be given to consultation with an addiction medicine specialist.

There is not enough evidence to permit generalizable conclusions regarding the abuse of opioids in chronic nonmalignant pain. However, careful patient selection and close monitoring of all nonmalignant pain patients on chronic opioids is necessary to assess effectiveness and watch for signs of abuse. *[Conclusion Grade III: See Conclusion Grading Worksheet A -- Annotation #19 (Chronic Pain and Chemical Use) in the original guideline document.]*

When there is non-compliance, escalation of opioid use, or increasing pain not responding to increasing opioids, consider whether this represents a response to inadequate pain control (pseudoaddiction, tolerance or opioid-induced hyperalgesia) or a behavioral problem indicating the patient is not a candidate for opioid therapy [M], [R]

Refer to Annotation #19 and Appendix G in the original guideline document for additional information on opioids.

Tricyclic Anti-depressants (TCAs)

Tricyclic anti-depressants have a role in the treatment of neuropathic pain, especially if the patient has co-existing insomnia, anxiety, or depression [A], [M]. TCAs are categorized as secondary amines (nortriptyline or desipramine) or tertiary amines (amitriptyline and imipramine). Both classes are effective in the treatment of neuropathic pain but the tertiary amines have more anticholinergic side effects and generally should be avoided in the elderly.

- Analgesic effects of TCAs are independent of their antidepressant effect and analgesia may be seen with lower doses.
- Start low and increase doses gradually over several weeks to months. Maximum analgesic effect may take several weeks or longer to be seen.
- Baseline electrocardiogram (ECG) is indicated in patients at risk for cardiac adverse effects.
- Common side effects include sedation, dry mouth, constipation, and urinary retention. Use caution in patients with conditions that may be aggravated by TCAs, including heart disease, symptomatic prostatic hypertrophy, neurogenic bladder, dementia, and narrow-angle glaucoma.

See Appendix H, "Pharmaceutical Interventions for Neuropathic Pain" in the original guideline document.

Other (Non-Tricyclic) Anti-depressants

The selective serotonin reuptake inhibitor class of antidepressants has reduced adverse effects compared with TCAs but efficacy in the treatment of

neuropathic pain is generally not as good as that shown with TCAs. Bupropion [A], venlafaxine [A], and duloxetine [A] have also shown efficacy in the treatment of neuropathic pain. These drugs can be recommended for patients who do not have adequate response or cannot tolerate TCAs. Duloxetine has been shown to improve pain and global measures of fibromyalgia, compared with placebo [A].

Anticonvulsant or Antiepileptic Drugs

The first generation anticonvulsants carbamazepine and phenytoin are effective in the treatment of neuropathic pain but may have unwanted central nervous system (CNS) side effects. Carbamazepine is approved for the treatment of trigeminal neuralgia and benefits are well established [M].

Pregabalin is indicated for treatment of diabetic neuropathy, postherpetic neuralgia, and fibromyalgia.

Oxcarbazepine is chemically similar to carbamazepine and may have benefits in the treatment of neuropathic pain, including trigeminal neuralgia and diabetic neuropathy.

The second generation agent gabapentin is approved for the treatment of postherpetic neuralgia, but has been shown to have analgesic effects in many cases of neuropathic pain syndromes [A]. To decrease the incidence of adverse effects, which are primarily somnolence and dizziness, start at low doses and titrate up gradually. See also Appendix H, "Pharmaceutical Interventions for Neuropathic Pain", in the original guideline document.

Lamotrigine has efficacy in trigeminal neuralgia, neuropathies associated with human immunodeficiency virus infection, and post-stroke pain.

Topical Agents

Topical lidocaine 5% patches (Lidoderm) are FDA approved for post-herpetic neuralgia and have shown efficacy in other neuropathic pain syndromes. Systemic absorption of lidocaine is minimal and the patch has a clean safety profile with the correct dosage schedule.

Capsaicin, the active ingredient in the herbal product cayenne, is used topically to deplete the pain mediator substance-P from afferent nociceptive neurons. Topical creams and solutions have been used in treating both neuropathic pain and arthritic pain. Capsaicin should be applied for at least six weeks to see full benefits. The side effect of local burning is common and most patients become tolerant after a few days [A], [D], [M].

Refer to the original guideline document for information on muscle relaxants and anti-spasmodics, anxiolytics, and drugs for insomnia.

Intervention Management

Key Points:

- Therapeutic procedures are used to alleviate or reduce chronic pain and should be used in conjunction with a comprehensive treatment plan developed by a chronic pain specialist.
- Interventional techniques should be performed in conjunction with a comprehensive treatment plan that includes pharmacologic, rehabilitative, and psychological interventions.
- Many of the Level I procedures provide both diagnostic and therapeutic benefits, while Level II are reserved for patients who have failed conventional treatment.
- Diagnostic procedures are used to identify neural or musculoskeletal structures that are the source of the patient's pain symptoms.
- The role of intervention modalities is different for chronic pain than acute and should be carefully evaluated by a pain specialist.

Interventional techniques refer to procedures including spinal injections, nerve blocks, spinal cord stimulators, and implantable intrathecal drug delivery systems that are performed in an attempt to diagnose and treat chronic pain. If used alone, the evidence is limited in its success. These procedures should be performed in conjunction with a comprehensive treatment plan that includes pharmacologic, rehabilitative, and psychological interventions. Commonly performed interventional procedures will be categorized as Level I (diagnostic and therapeutic) and Level II (palliative). Many of the Level I procedures provide both diagnostic and therapeutic benefits while Level II interventions are reserved for patients who have failed conventional treatment.

The role of intervention modalities is different for chronic pain than acute and should be carefully evaluated by a pain specialist.

See also Annotation #25, "Level II Management: Interdisciplinary Team Referral, Plus a Pain Medicine Specialist or Pain Medicine Specialty Clinic" below.

Level I Diagnostic Procedures

Examples of commonly performed Level I diagnostic procedures include sacroiliac joint injection, transforaminal epidural injection, and discography.

Level I Therapeutic Procedures

Examples of commonly used Level I therapeutic procedures include facet joint injection, percutaneous radiofrequency neurotomy, intradiscal electrothermal therapy, epidural corticosteroid injections, vertebroplasty and kyphoplasty, and trigger point injections.

Refer to the original guideline document for detailed information on Level I diagnostic and therapeutic procedures.

Complementary Management

Acupuncture

Clinical research with randomized, placebo-controlled trials supports the use of acupuncture for certain chronic pain conditions such as fibromyalgia [A], [M], headache [A], [M], back pain [A], neck pain [A], and osteoarthritis of the knee [A].

Refer to the original guideline document for more information on acupuncture.

Herbal Products Used for Pain

While there are many herbal products used for pain, the following have some supporting data for use in the treatment of pain, but may still have significant potential for drug interactions and adverse effects: Devil's Claw, dimethyl sulfoxide (DMSO), Feverfew, glucosamine and chondroitin, and Willow Bark. DMSO is mentioned due to the frequency of use, despite evidence of toxicity and lack of documented efficacy.

Refer to the original guideline document for more detailed information on herbal products used for pain.

24. Has Enough Been Tried with Level I Management?

Failure to achieve improvement in chronic pain management using Level I management strategies, the primary care physician should consider a consultation and/or referral to a pain medicine specialist or pain medicine specialty clinic.

Reasons for consultation may include:

- Diagnostic assistance
- Advice on availability of current care plan and treatment strategies
- Advice on optimal pharmacotherapy
- Help with treatment planning for long-term pain management

Referral to a comprehensive pain management program should be strongly considered when a patient needs an intensive comprehensive evaluation by a pain management team (physician, psychologist, physical therapist, pharmacist, etc.). The team should have extensive training and experience in pain management and each professional should be working as part of a multidisciplinary team in a pain management center to meet the patient's needs.

The team works as part of a structured integrated long-term program where the goal is effective stabilization of the patient's pain, development of a pain management care plan, and return of the patient to be a functioning member of society.

25. Level II Management: Interdisciplinary Team Referral, Plus a Pain Medicine Specialist or Pain Medicine Specialty Clinic

Key Points:

- The Level II interdisciplinary team should do a thorough biopsychosocial assessment of the patient with chronic pain, and a comprehensive plan of care should be developed with active input from the patient and primary care provider.
- Surgery alone for chronic pain relief lacks compelling evidence of efficacy.
- Palliative interventions are used when conventional and less invasive procedures have failed, and patients should have documented compliance with a comprehensive care plan, with surgery not a viable option.

Level II management of patients with chronic pain is indicated when the patient has had a thorough trial of Level I management (see annotations #14-24 above), yet has not met the goals of comfort/pain control and function. Level II management should include an interdisciplinary team including the primary care provider, a medical pain specialist, a behavioral health pain specialist, and a physical therapist trained in a biopsychosocial approach to chronic pain. If possible, this management should be provided in the patient's community. If an interdisciplinary Level II pain team is not available in the community, it may be necessary to obtain these services outside the community. As with Level I management, Level II management should continue to be coordinated by the primary care provider.

Level II interdisciplinary chronic pain team assessment should be obtained in a timely manner, sometimes as early as four to eight weeks after the onset of acute pain. The goal is to prevent or effectively manage chronic pain syndrome (disability in work or personal function related to pain).

The Level II interdisciplinary team should do a thorough biopsychosocial assessment of the patient with chronic pain. A comprehensive plan of care should be developed with active input from the patient and primary care provider. The plan of care should focus on objective functional goals and pain management. Elective surgery and invasive procedures should be done after the Level II interdisciplinary team assessment. Specific goals to integrate the patient back into the community and to usual activities should be a part of the plan of care.

Surgical Management of Patients with Chronic Pain

Surgery alone for chronic pain relief lacks compelling evidence of efficacy [M], [R].

- Cauda equina syndrome is a neurosurgical or orthopedic spine surgery emergency. See the NGC summary of the ICSI guideline [Adult Low Back Pain](#).
- For sudden, progressive or severe neuromotor deficit (e.g., foot drop or elbow extensor weakness, difficulty walking), consult a spine surgery specialist [R]. See also the NGC summary of the ICSI guideline [Adult Low Back Pain](#).
- Patients with persistent radicular pain after appropriate conservative treatment may be candidates for surgical treatment [R]. See also the NGC summary of the ICSI guideline [Adult Low Back Pain](#).

Surgery for patients with chronic pain may not be helpful, and may be harmful [C].

- Surgery for chronic pain is usually elective.
 - Do a psychosocial screen before doing elective surgery (screen for personality disorder or psychopathology that may interfere with good outcome).
 - Be sure patient has had a thorough conservative management program before considering elective surgery.
 - Be sure patient expectations of surgery are reasonable by providing clear evidence-based information [R].
- Check for serious medical and surgical pathology before starting pain management program.
- Focus on improving function, not just pain [R].
- Surgery for chronic low back pain may benefit some patients, "but nearly half will not benefit" [R].
- Neurosurgical techniques for chronic pain resistant to an adequate conservative approach hold promise, but have limited scientific evidence [R]:
 - Ablative techniques include cordotomy, myelotomy, cingulotomy, and mesencephalotomy.
 - Stimulation techniques include motor cortex stimulation, deep brain stimulation, and spinal cord stimulation.

Patients with chronic pain are best managed with an interdisciplinary team approach [R].

- Before doing elective surgery, obtain an interdisciplinary team assessment.
- Discuss realistic outcome before surgery (effect of surgery on pain and function including activities of daily living and vocation).
- After surgery the patient with chronic pain is best managed by an interdisciplinary team using a biopsychosocial approach.

Patients with chronic pain should have outcome measurement before and after surgery to determine efficacy [R].

- After surgery, patient should have an active pain rehabilitation program and should start an independent lifetime fitness program.

Refer to the original guideline document for information on palliative interventions including nucleoplasty, spinal cord stimulation, intrathecal medication delivery systems, and multidisciplinary pain rehabilitation.

Definitions:

Conclusion Grades:

Grade I: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant

doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

Grade II: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

Grade Not Assignable: There is no evidence available that directly supports or refutes the conclusion.

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Non-randomized trial with concurrent or historical controls
- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

CLINICAL ALGORITHM(S)

Detailed and annotated clinical algorithms are provided for:

- [Assessment of Chronic Pain](#)
- [Management of Chronic Pain](#)

In addition, an algorithm for Neuropathic Pain Treatment is provided in Appendix I of the original guideline document.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is classified for selected recommendations (see "Major Recommendations.")

In addition, key conclusions contained in the Work Group's algorithm are supported by a grading worksheet that summarizes the important studies pertaining to the conclusion. The type and quality of the evidence supporting these key recommendations is graded for each study.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Improved function of adult patients with chronic pain
- Improved assessment and reassessment of patients with chronic pain utilizing the biopsychosocial model
- Appropriate use of Level I and Level II treatment approaches
- Effective use of non-opioid medications
- Effective use of opioid medications

POTENTIAL HARMS

Adverse Effects of Medications

Acetaminophen

- May have chronic renal or hepatic adverse effects; should be used cautiously or avoided in patients with liver impairment.

Non-steroidal Anti-inflammatory Drugs (NSAIDs)

- Gastritis and possible bleeding
- Chronic NSAID use increases the risk of renal insufficiency, especially those with diabetes, and patients should be monitored for signs of reduced renal function
- Cardiovascular side effects
- Caution in patients with coagulopathies or thrombocytopenia and those at risk for bleeding

Selective Cyclooxygenase-2 (Cox-2) Inhibitors

- High dose, long-term use of COX-2 agents has a higher rate of cardiovascular adverse effects than NSAIDs.

Anticonvulsant Drugs

- Somnolence
- Dizziness
- Fatigue
- Nausea
- Edema
- Weight gain
- Stevens-Johnson syndrome
- Increased risk of suicidal behavior or ideation
- Aplastic anemia and agranulocytosis (in association with the use of *carbamazepine*; genetic testing is recommended prior to initiation of carbamazepine therapy in most patients of Asian ancestry for the presence of the HLA-B*1502 allele genetic marker to decrease the risk of developing Steven-Johnson syndrome [SJS] and/or toxic epidermal necrolysis [TEN])

Tricyclic Antidepressants

- Sedation
- Dry mouth
- Constipation
- Urinary retention
- Orthostatic hypotension
- Anticholinergic side effects
- Use with caution in patients with conditions that may be aggravated by tricyclic antidepressants including heart disease, symptomatic prostatic hypertrophy, neurogenic bladder, dementia, and narrow-angle glaucoma

- Tertiary amines (amitriptyline, imipramine) have greater anticholinergic side effects and may cause arrhythmia, orthostatic hypotension; therefore, these agents should not be used in elderly patients.
- Increased suicidal behavior in young adults

Topical Capsaicin

- Local burning

Opioids

- *Methadone*: Due to the complexity of dosing and potential for cardiac adverse effects, the use of this opiate should be reserved for experienced practitioners.
- *Propoxyphene* has central nervous system adverse effects more commonly seen in the elderly and people with renal insufficiency.
- *Tramadol*: Side effects include abdominal discomfort, dizziness, constipation, seizures. May interact with other serotonergic drugs to cause serotonin syndrome. It has abuse potential despite unscheduled status.
- *Oxycodone*: Side effects include constipation, drowsiness, confusion, nausea, itching, dependence, abstinence syndrome upon abrupt withdrawal at doses >20 mg per day.

Refer to Appendices G and H in the original guideline document for additional information on side effects of antidepressants, antiepileptic drugs, and opioids used in chronic pain syndrome.

Herbal Products

- *Glucosamine* may affect blood glucose and should be avoided or used cautiously in diabetics.
- *Willow Bark*: Adverse effects are similar to aspirin therapy.

Surgery

- Surgery for patients with chronic pain may not be helpful, and may be harmful.

Acupuncture

- Common complications of acupuncture include fainting, discomfort and bruising. Infrequent complications include infection, pneumothorax, and nerve injury.

CONTRAINDICATIONS

CONTRAINDICATIONS

Relative Contraindications to Opioid Use

- History of substance abuse or prior prescription drug misuse
- Unsanctioned dose escalation on several occasions
- Nonadherence to other recommendations for pain therapy
- Unwillingness or inability to comply with treatment plan
- Social instability
- Unwillingness to adjust at-risk activities resulting in serious re-injury requiring additional opioid prescriptions

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- This guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients are urged to consult a health care professional regarding their own situations and any specific medical questions they may have.
- This clinical guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Once a guideline is approved for general implementation, a medical group can choose to concentrate on the implementation of that guideline. When four or more groups choose the same guideline to implement and they wish to collaborate with others, they may form an action group.

In the action group, each medical group sets specific goals they plan to achieve in improving patient care based on the particular guideline(s). Each medical group shares its experiences and supporting measurement results within the action group. This sharing facilitates a collaborative learning environment. Action group learnings are also documented and shared with interested medical groups within the collaborative.

Currently, action groups may focus on one guideline or a set of guidelines such as hypertension, lipid treatment, and tobacco cessation.

Detailed measurement strategies are presented in the original guideline document to help close the gap between clinical practice and the guideline recommendations. Summaries of the measures are provided in the National Quality Measures Clearinghouse (NQMC).

Key Implementation Recommendations

The following system changes were identified by the guideline work group as key strategies for health care systems to incorporate in support of the implementation of this guideline.

1. It is important to take both a clinical and an operational approach for successful implementation of this guideline.
2. Develop a process that allows patients with chronic pain to see a dedicated care provider who has an interest or expertise in chronic pain. The care provider is responsible for care management involving chronic pain in order to foster continuity while allowing the primary care physician to focus on medical diagnosis.
3. Develop a process for handing off patients to a dedicated chronic pain provider within the clinic.
4. Develop a process to work collaboratively with other care providers in prescribing opioids with shared patients (e.g., dentists, specialists).
5. Establish a policy for monitoring and maintaining opioid agreements for prescription refills with other clinics, pharmacies, dentists and specialists.
6. Develop a process for scheduling follow-up patient visits to deter drug-seeking behaviors with other care providers. For instance, support personnel calling patients to schedule follow-up appointments with dedicated chronic pain physician.
7. Develop staff and physician training regarding the organization's process for treating chronic pain patients that could include process of referrals to chronic pain provider within the system, follow-up visits, prescription refills and continuity of care.
8. Assemble a chronic pain care team that minimally consists of a physician champion and medical support staff. Suggestion for care providers from other disciplines includes pharmacy, chemical dependency, neurology, home care, social work, physical medicine and rehabilitation and physical therapy.
9. Determine population International Classification of Diseases, Ninth Revision (ICD-9) codes for data collection that is unique to chronic pain patients in your facility. Examples of this would be:
 - Low back pain
 - Headache
 - Neck pain
 - Fibromyalgia
 - Chronic pain
10. Identify multidimensional pain assessment, functional assessment, psychological assessment, and opioid assessment tools that meet the needs of the care providers and are appropriate for the patient populations.

Examples of pain assessment, functional assessment, and psychological assessment tools are, but not limited to:

- Brief Pain Inventory (BPI)
- Functional Ability Questionnaire
- Oswestry Low Back Disability Index (refer to the NGC summary of the ICSI guideline [Adult Low Back Pain](#))
- Patient Health Questionnaire (PHQ-9)

Examples of opioid and substance abuse assessment tools are, but not limited to:

- CAGE-AID
- Webster's Opioid Risk Tool
- DIRE Tool
- Opioid Assessment for Patients in Pain (SOAPP®)

IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms
Clinical Algorithm
Patient Resources
Pocket Guide/Reference Cards
Quality Measures
Quick Reference Guides/Physician Guides

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

RELATED NQMC MEASURES

- [Assessment and management of chronic pain: percentage of patients diagnosed with chronic pain who are prescribed an opioid who have an opioid agreement form and urine toxicology screen documented in the medical record.](#)

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Jul. 84 p. [171 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

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GUIDELINE DEVELOPER(S)

Institute for Clinical Systems Improvement - Private Nonprofit Organization

GUIDELINE DEVELOPER COMMENT

Organizations participating in the Institute for Clinical Systems Improvement (ICSI): Affiliated Community Medical Centers, Allina Medical Clinic, Altru Health System, Aspen Medical Group, Avera Health, CentraCare, Columbia Park Medical Group, Community-University Health Care Center, Dakota Clinic, ENT Specialty Care, Fairview Health Services, Family HealthServices Minnesota, Family Practice Medical Center, Gateway Family Health Clinic, Gillette Children's Specialty Healthcare, Grand Itasca Clinic and Hospital, HealthEast Care System, HealthPartners Central Minnesota Clinics, HealthPartners Medical Group and Clinics, Hutchinson Area Health Care, Hutchinson Medical Center, Lakeview Clinic, Mayo Clinic, Mercy Hospital and Health Care Center, MeritCare, Mille Lacs Health System, Minnesota Gastroenterology, Montevideo Clinic, North Clinic, North Memorial Care System, North Suburban Family Physicians, Northwest Family Physicians, Olmsted Medical Center, Park Nicollet Health Services, Pilot City Health Center, Quello Clinic, Ridgeview Medical Center, River Falls Medical Clinic, Saint Mary's/Duluth Clinic Health System, St. Paul Heart Clinic, Sioux Valley Hospitals and Health System, Southside Community Health Services, Stillwater Medical Group, SuperiorHealth Medical Group, University of Minnesota Physicians, Winona Clinic, Ltd., Winona Health

ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; e-mail: icsi.info@icsi.org; Web site: www.icsi.org.

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GUIDELINE COMMITTEE

Committee on Evidence-Based Practice

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Work Group Members: Richard Timming, MD (*Work Group Leader*) (HealthPartners Medical Group) (Physical Medicine and Rehabilitation); W. Michael Hooten, MD (Mayo Clinic) (Anesthesiology); Louis Saeger, MD (Midwest Spine

Institute) (Anesthesiology); Brian Bonte, DO (Hutchinson Medical Center) (Family Medicine); David von Weiss, MD (Park Nicollet Health Services) (Family Medicine); Susan Ferron, MD (Community University Health Care Center) (Internal Medicine); James Smith, MD (HealthPartners Medical Group) (Internal Medicine); Michelle Bensen, MD (Marshfield Clinic) (Internal Medicine/Addiction Medicine); Miles Belgrade, MD (Fairview Health Services) (Neurology); Patrick Rivard, RN (Gillette Children's Specialty Healthcare) (Nursing); Galina Shteyman, PharmD (Park Nicollet Health Services) (Pharmacy); Neal Walker, RPh (Fairview Range Regional Health Services) (Pharmacy); Barbara Bruce, PhD (Mayo Clinic) (Psychology); Janet Jorgenson-Rathke, PT (Institute for Clinical Systems Improvement) (Measurement/Implementation Advisor); Pam Pietruszewski, MA (Institute for Clinical Systems Improvement) (*Facilitator*)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

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ICSI's conflict of interest policy and procedures are available for review on ICSI's website at www.icsi.org.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Institute for Clinical Systems Improvement (ICSI). Assessment and management of chronic pain. Bloomington

(MN): Institute for Clinical Systems Improvement (ICSI); 2007 Mar. 87 p. [157 references]

GUIDELINE AVAILABILITY

Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Assessment and management of chronic pain. Executive summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2008 Jul. 1 p. Electronic copies: Available in Portable Document Format (PDF) from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Assessment and management of chronic pain. Guideline summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2008 Jul. 8 p. Electronic copies: Available in Portable Document Format (PDF) from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Brief pain inventory (Short Form). Appendix A in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Patient Health Questionnaire (PHQ-9). Appendix B in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Functional ability questionnaire. Appendix C in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Personal care plan for chronic pain. Appendix D in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- DIRE score: patient selection for chronic opioid analgesia. Appendix E in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Opioid agreement form. Appendix F in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- Neuropathic pain treatment diagram. Appendix I in the original guideline document. Electronic copies: Available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).
- ICSI pocket guidelines. May 2007 edition. Bloomington (MN): Institute for Clinical Systems Improvement, 2007.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

PATIENT RESOURCES

The following is available:

- Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Mar. 54 p.

Electronic copies: Available in Portable Document Format (PDF) from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

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