

## Chronic Pain Management Guidelines

### Introduction

The International Association for the Study of Pain defines pain as an “unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.”<sup>1</sup> Pain is a multifactorial process that has both objective and subjective components. Additionally, the Institute of Medicine estimates that 100 million Americans suffer from chronic pain.<sup>2</sup>

Chronic pain is complex and can manifest in many ways.<sup>3</sup> Pain is a continuum; inappropriately treated acute pain can transition to chronic pain.<sup>4,5</sup> Chronic pain may result from injury, nerve damage, or various disease states, or it can be idiopathic. Additionally, chronic pain may have a psychological component leading to anxiety, depression, or somatization disorders. Chronic pain is differentiated from acute pain by its persistence, physiological maintenance mechanisms, and its potential impact on an individual’s functioning and quality of life.<sup>6</sup> Inadequate treatment of pain, either under treatment or over treatment, can lead to negative health effects, a decreased quality of life, or adverse events. Finally, the goal of chronic pain management is to use a patient-centered approach to treat the patient’s pain and improve the patient’s well-being, functionality, and quality of life.

### Purpose

The purpose of these guidelines is to promote safe and effective chronic pain management. The *Standards for Nurse Anesthesia Practice* are the foundation for chronic pain management practice.<sup>7</sup> The *Chronic Pain Management Guidelines* are intended to promote high-quality care and do not assure specific outcomes. These guidelines were developed using an evidence-based literature review process, AANA pain management scope of practice membership survey, ongoing consultation with the AANA Practice Committee and the Pain Management Work Team, which is composed of Certified Registered Nurse Anesthetist (CRNA) pain management experts, and an open comment survey of a sample of AANA members.

### CRNA Scope of Practice

CRNAs practice in accordance with their professional scope of practice, federal and state law, and facility policy to provide chronic pain management services.<sup>8</sup>

As advanced practice registered nurses, CRNAs are uniquely skilled to deliver pain treatment in a compassionate and holistic manner. By virtue of education and individual clinical experience and competency, a CRNA may practice chronic pain management utilizing a variety of therapeutic, physiological, pharmacological, interventional, and psychological modalities in the management and treatment of pain. As part of their educational preparation, CRNAs are required to learn and demonstrate competence in the management of pain, a critical component in the delivery of anesthesia care. The Council on Accreditation of Nurse Anesthesia Educational Programs (COA) standards require that nurse anesthesia programs provide content in anatomy, physiology, pathophysiology, pharmacology, and pain management, and require that nurse anesthesia students obtain clinical experiences in regional anesthetic techniques (i.e., spinal, epidural, and peripheral).<sup>9</sup>

As the understanding of the patient's pain experience, its corresponding transmission processes, and pain treatment modalities have evolved, the role of healthcare professionals in treating pain has seen a similar evolution. As new knowledge is discovered and new treatment modalities and technologies emerge, these advancements will logically translate into clinical practice with the goal of improving patient outcomes.

### **CRNA Chronic Pain Management Practice Models**

The guidelines below outline the broad process for the management of chronic pain. Chronic pain management services are provided by CRNAs in a variety of practice models based on patient, provider, and facility needs. CRNAs may be members of a multidisciplinary pain management team, receive referrals from other clinicians, or serve as the sole providers of chronic pain management services. CRNAs provide patient-centered chronic pain treatments, working toward the common goal of decreasing the patient's pain and improving the patient's quality of life and functionality.

When working in collaboration with a patient's primary care provider or other referring clinician, CRNAs may share certain responsibilities of chronic pain management. The CRNA reviews and may add relevant findings to information provided by a referring clinician (e.g., history and physical, diagnostic results, etc.) in order to safely administer chronic pain management services. CRNAs are responsible and accountable for judgments made and actions taken in their professional practice.<sup>10</sup>

## **Chronic Pain Management Guidelines**

### **1. Patient Evaluation**

#### **a. Patient History and Physical**

Complete a patient health history and physical examination, which should include, but not be limited to: a review of allergies and health, surgical, medication, and social history; and a focused pain evaluation addressing pain symptoms, identification of pain risk factors, and current and previous pain treatments.<sup>11-18</sup> If available at time of referral, the CRNA should review the results of previous diagnostic testing, psychological evaluation, and diagnosis.

#### **b. Diagnosis**

Both non-interventional and interventional diagnostic procedures may be employed as part of the assessment and evaluation of the patient's pain. These procedures may include, but are not limited to, laboratory testing, diagnostic imaging, electrodiagnostic studies, and focused regional injections as indicated.<sup>19-26</sup>

### **2. Management**

#### **a. Plan of Care**

Formulate a patient-specific treatment plan based on a dynamic, comprehensive assessment and evaluation.<sup>27,28</sup> The plan should integrate baseline functional capacity and set realistic functional goals, including measurable targets for pain management.<sup>29</sup> A plan to implement alternative modalities should be considered and developed, as appropriate, if the original goals and targets are not met.

**b. Education**

Patient and family education should be made available regarding etiology of pain, treatment plan and goals, potential alternative therapy, and consequences for non-adherence to the treatment plan.<sup>30-33</sup> Discuss possible side effects and complications of the treatment regimen with the patient and family. In addition, provide instruction on the plan to address these side effects and respond to complications, should they occur.<sup>30,32,33</sup> All discussions with the patient's family or other caretakers should be conducted in compliance with state and federal healthcare privacy laws.

**c. Informed Consent and Treatment Agreement**

Obtain and document informed consent. The informed consent process should include a discussion of the individualized treatment plan, planned procedures, alternatives methods of treatment, and risks and benefits of the plan. For additional guidance regarding informed consent, review the AANA's *Informed Consent in Anesthesia*.<sup>34</sup>

CRNAs should be aware of potential drug-seeking behavior. CRNAs should enter into a pain management treatment agreement with the patient, when appropriate. The pain management treatment agreement establishes an understanding of the elements of the treatment plan and outlines patient and provider responsibilities, expectations for compliance, and response to emergency issues.<sup>18,19,27-29,35-37</sup>

**d. Non-Pharmacologic Management**

Non-pharmacologic treatment modalities may decrease pain and, when appropriate, should be considered as part of the plan of care. These treatments may include, but are not limited to, hypnosis, acupuncture, massage, meditation, reflexology, relaxation techniques, biofeedback, counseling, physical therapy, occupational therapy, or therapeutic manipulation.<sup>6,15,18,38-51</sup> CRNAs should exercise an interdisciplinary approach to patient care and consult with or refer patients to other clinicians, as appropriate.<sup>3,18,19,30</sup>

**e. Pharmacologic Management**

Pharmacologic interventions may be managed by the CRNA, the patient's primary care provider, or referring clinician. CRNA prescriptive authority varies depending on state law. Pharmacologic treatment of chronic pain may include, but is not limited to, topically applied medications, local anesthetics, steroidal and non-steroidal anti-inflammatory agents, anticonvulsants, antidepressants, sedatives, muscle relaxants, non-opioid analgesics, antispasmodics, opioids, and new agents as released.<sup>12,15,28,52,53</sup>

Pharmacologic treatment should be tailored to the patient's level of pain, functionality, and response.<sup>12,18,19</sup> Medications should be titrated incrementally to achieve an adequate level of analgesia.<sup>18,28,54</sup> Tapering or discontinuing medications should be considered if the patient's pain is not adequately controlled when taking appropriate doses or if there is no functional improvement on medication therapy.

**f. Interventional Therapeutic Techniques**

Interventional techniques may be indicated in the management of chronic pain in conjunction with or following non-pharmacologic and/or pharmacologic treatment modalities. These techniques may include, but are not limited to: trigger point injection, peripheral nerve block, sympathetic nerve block, medial or lateral branch block, joint injection (e.g., facet, sacroiliac), intrathecal injection, epidural steroid injection, nerve ablation techniques, and evaluation and management of implantable systems.<sup>3,15,19,20,55-58</sup>

**g. Ongoing Assessment and Evaluation**

Monitor, measure, and evaluate the patient's pain, functionality, and response to the treatment plan and adjust the treatment plan accordingly.<sup>17,27,37</sup>

**h. Safety**

Patient and healthcare provider safety are paramount. CRNAs integrate safety into the delivery of care and adhere to standards, guidelines, applicable laws, and facility policies. Chronic pain management practice incorporates appropriate patient monitoring,<sup>7</sup> procedure time-out,<sup>59</sup> universal infection control precautions,<sup>60</sup> safe injection practices,<sup>61</sup> and radiation safety.<sup>62</sup> For additional guidance, review the AANA's *Standards for Nurse Anesthesia Practice*,<sup>7</sup> *Patient-Centered Perianesthesia Communication, Practice Considerations*,<sup>59</sup> *Infection Control Guide for Certified Registered Nurse Anesthetists*,<sup>60</sup> and *Safe Injection Guidelines for Needle and Syringe Use*.<sup>61</sup>

**3. Imaging Technology**

Ultrasound, fluoroscopy, CT guidance, or emerging imaging technology may be used, as appropriate, to enhance patient safety and accuracy of invasive diagnostic and therapeutic procedures.<sup>63-67</sup>

**4. Documentation**

Document pertinent information on the patient's medical record in an accurate, complete, legible, and timely manner. The patient's record may include: the results of the patient assessment and evaluation; diagnosis with supporting documentation (e.g., diagnostic testing, laboratory results, etc.); the patient-specific treatment plan, goals, and objectives; documentation of informed consent; documentation of the procedure; and images of needle placement, if imaging technology was used.<sup>19,27,30,37</sup>

**5. Communication**

The CRNA and the patient's treatment team, primary care provider, or referring clinician should have ongoing communication regarding the patient's status, treatment plan, treatment compliance, and prognosis to coordinate the plan for ongoing chronic pain management.<sup>3,27,30</sup>

**6. Continuous Quality Improvement**

CRNAs demonstrate continued competency for treatment management, procedures performed, and technology employed. CRNAs engage in continuous quality improvement through the use of performance metrics and monitoring of performance outcomes. For additional guidance, review the AANA's *Scope of Nurse Anesthesia Practice*,<sup>8</sup> *Guidelines for Core Clinical Privileges for Certified Registered Nurse Anesthetists*,<sup>68</sup> and *Continued Competency*.<sup>69</sup>

**References**

1. Loeser JD, Treede RD. The Kyoto protocol of IASP Basic Pain Terminology. *Pain*. Jul 31 2008;137(3):473-477.
2. IOM (Institute of Medicine). *Relieving Pain in America: A Blueprint for Transforming Prevention Care, Education, and Research*. 2011.
3. Blau WS. The needle in a haystack: appropriate use of interventional techniques in the management of chronic pain. *N C Med J*. May-Jun 2013;74(3):215-217.
4. Katz J, Seltzer Z. Transition from acute to chronic postsurgical pain: risk factors and protective factors. *Expert Rev Neurother*. May 2009;9(5):723-744.
5. Larner D. Chronic Pain Transition: A Concept Analysis. *Pain Manag Nurs*. Sep 2014;15(3):707-717.

6. Roditi D, Robinson ME. The role of psychological interventions in the management of patients with chronic pain. *Psychol Res Behav Manag*. 2011;4:41-49.
7. Standards for Nurse Anesthesia Practice. Park Ridge, IL: American Association of Nurse Anesthetists; 2013.
8. Scope of Nurse Anesthesia Practice. Park Ridge, IL: American Association of Nurse Anesthetists; 2013.
9. Standards for Accreditation of Nurse Anesthesia Programs: Practice Doctorate. Park Ridge, IL: Council on Accreditation of Nurse Anesthesia Educational Programs; 2014.
10. Code of Ethics for the Certified Registered Nurse Anesthetist. Park Ridge, IL: American Association of Nurse Anesthetists; 2005.
11. Michna E, Ross EL, Hynes WL, et al. Predicting aberrant drug behavior in patients treated for chronic pain: importance of abuse history. *J Pain Symptom Manage*. Sep 2004;28(3):250-258.
12. Cooper JW, Burfield AH. Assessment and management of chronic pain in the older adult. *J Am Pharm Assoc*. May-Jun 2010;50(3):e89-99; quiz e100-101.
13. Apeldoorn AT, Bosselaar H, Ostelo RW, et al. Identification of patients with chronic low back pain who might benefit from additional psychological assessment. *Clin J Pain*. Jan 2012;28(1):23-31.
14. Cui J, Matsushima E, Aso K, Masuda A, Makita K. Psychological features and coping styles in patients with chronic pain. *Psychiatry Clin Neurosci*. Apr 2009;63(2):147-152.
15. Turk DC, Wilson HD, Cahana A. Treatment of chronic non-cancer pain. *Lancet*. Jun 25 2011;377(9784):2226-2235.
16. Breivik H, Borchgrevink PC, Allen SM, et al. Assessment of pain. *Br J Anaesth*. Jul 2008;101(1):17-24.
17. Irving G, Squire P. Medical evaluation of the chronic pain patient. In: Fishman SM, Ballantyne JC, Rathmell JP, eds. *Bonica's Management of Pain*. 4th ed. Baltimore, MD: Lippincott, Williams & Wilkins; 2010:209-223.
18. Debono DJ, Hoeksema LJ, Hobbs RD. Caring for patients with chronic pain: pearls and pitfalls. *J Am Osteopath Assoc*. Aug 2013;113(8):620-627.
19. Garg R, Joshi S, Mishra S, Bhatnagar S. Evidence based practice of chronic pain. *Indian J Palliat Care*. Sep 2012;18(3):155-161.
20. American Association of Nurse Anesthetists. AANA Chronic Pain Management Survey. Data collected February 12, 2013 – May 15, 2013.
21. Saal JS. General principles of diagnostic testing as related to painful lumbar spine disorders: a critical appraisal of current diagnostic techniques. *Spine (Phila Pa 1976)*. Nov 15 2002;27(22):2538-2545; discussion 2546.
22. Sehgal N, Dunbar EE, Shah RV, Colson J. Systematic review of diagnostic utility of facet (zygapophysial) joint injections in chronic spinal pain: an update. *Pain Physician*. Jan 2007;10(1):213-228.
23. Hansen HC, McKenzie-Brown AM, Cohen SP, Swicegood JR, Colson JD, Manchikanti L. Sacroiliac joint interventions: a systematic review. *Pain Physician*. Jan 2007;10(1):165-184.
24. Cohen SP. Sacroiliac joint pain: a comprehensive review of anatomy, diagnosis, and treatment. *Anesth Analg*. Nov 2005;101(5):1440-1453.
25. Miyakoshi A, Maravilla KR. Diagnostic imaging of pain. In: Fishman SM, Ballantyne JC, Rathmell JP, eds. *Bonica's Management of Pain*. 4th ed. Baltimore, MD: Lippincott, Williams & Wilkins; 2010:234-251.
26. Curatolo M, Bogduk N. Diagnostic and therapeutic nerve blocks. In: Fishman SM, Ballantyne JC, Rathmell JP, eds. *Bonica's Management of Pain*. 4th ed. Baltimore, MD: Lippincott, Williams & Wilkins; 2010:1401-1423.

27. Jackman RP, Purvis JM, Mallett BS. Chronic nonmalignant pain in primary care. *Am Fam Physician*. Nov 15 2008;78(10):1155-1162.
28. Burton AW, Fine PG, Passik SD. Transformation of acute cancer pain to chronic cancer pain syndromes. *J Support Oncol*. May-Jun 2012;10(3):89-95.
29. Teichman PG. A tool for safely treating chronic pain. *Fam Pract Manag*. Nov-Dec 2001;8(10):47-49.
30. Turk DC, Stanos PS, Palermo TM, et al. *Interdisciplinary Pain Management*. Glenview, IL: American Pain Society. 2010.
31. Morlion B, Kempke S, Luyten P, Coppens E, Van Wambeke P. Multidisciplinary pain education program (MPEP) for chronic pain patients: preliminary evidence for effectiveness and mechanisms of change. *Curr Med Res Opin*. Aug 2011;27(8):1595-1601.
32. Dorflinger L, Kerns RD, Auerbach SM. Providers' roles in enhancing patients' adherence to pain self management. *Transl Behav Med*. Mar 2013;3(1):39-46.
33. Butow P, Sharpe L. The impact of communication on adherence in pain management. *Pain*. Dec 2013;154 Suppl 1:S101-107.
34. *Informed Consent in Anesthesia*. Park Ridge, IL: American Association of Nurse Anesthetists; 2004.
35. Hariharan J, Lamb GC, Neuner JM. Long-term opioid contract use for chronic pain management in primary care practice. A five year experience. *J Gen Intern Med*. Apr 2007;22(4):485-490.
36. Fishman SM, Bandman TB, Edwards A, Borsook D. The opioid contract in the management of chronic pain. *J Pain Symptom Manage*. Jul 1999;18(1):27-37.
37. Gourlay DL, Heit HA, Almahrezi A. Universal precautions in pain medicine: a rational approach to the treatment of chronic pain. *Pain Med*. Mar-Apr 2005;6(2):107-112.
38. Abrahamsen R, Baad-Hansen L, Svensson P. Hypnosis in the management of persistent idiopathic orofacial pain--clinical and psychosocial findings. *Pain*. May 2008;136(1-2):44-52.
39. Tan G, Fukui T, Jensen MP, Thornby J, Waldman KL. Hypnosis treatment for chronic low back pain. *Int J Clin Exp Hypn*. Jan 2010;58(1):53-68.
40. Tan G, Rintala DH, Jensen MP, Fukui T, Smith D, Williams W. A randomized controlled trial of hypnosis compared with biofeedback for adults with chronic low back pain. *Eur J Pain*. Jun 17 2014.
41. Jensen MP, Patterson DR. Hypnotic approaches for chronic pain management: clinical implications of recent research findings. *Am Psychol*. Feb-Mar 2014;69(2):167-177.
42. Turk DC, Swanson KS, Tunks ER. Psychological approaches in the treatment of chronic pain patients--when pills, scalpels, and needles are not enough. *Can J Psychiatry*. Apr 2008;53(4):213-223.
43. Kerns RD, Sellinger J, Goodin BR. Psychological treatment of chronic pain. *Annu Rev Clin Psychol*. 2011;7:411-434.
44. Kroner-Herwig B. Chronic pain syndromes and their treatment by psychological interventions. *Curr Opin Psychiatry*. Mar 2009;22(2):200-204.
45. Williams AC, Eccleston C, Morley S. Psychological therapies for the management of chronic pain (excluding headache) in adults. *Cochrane Database Syst Rev*. 2012;11:CD007407.
46. Vickers AJ, Cronin AM, Maschino AC, et al. Acupuncture for chronic pain: individual patient data meta-analysis. *Arch Intern Med*. Oct 22 2012;172(19):1444-1453.
47. Bahrami-Taghanaki H, Liu Y, Azizi H, et al. A randomized, controlled trial of acupuncture for chronic low-back pain. *Altern Ther Health Med*. May-Jun 2014;20(3):13-19.

48. Eshkevari L. Acupuncture and pain: a review of the literature. *AANA J.* Oct 2003;71(5):361-370.
49. Bryans R, Decina P, Descarreaux M, et al. Evidence-based guidelines for the chiropractic treatment of adults with neck pain. *J Manipulative Physiol Ther.* Jan 2014;37(1):42-63.
50. van Middelkoop M, Rubinstein SM, Verhagen AP, Ostelo RW, Koes BW, van Tulder MW. Exercise therapy for chronic nonspecific low-back pain. *Best Pract Res Clin Rheumatol.* Apr 2010;24(2):193-204.
51. Rubinstein SM, van Middelkoop M, Assendelft WJ, de Boer MR, van Tulder MW. Spinal manipulative therapy for chronic low-back pain. *Cochrane Database Syst Rev.* 2011(2):CD008112.
52. Argoff CE. Topical analgesics in the management of acute and chronic pain. *Mayo Clin Proc.* Feb 2013;88(2):195-205.
53. McGuirk BE, Bogduk N. Chronic low back pain. In: Fishman SM, Ballantyne JC, Rathmell JP, eds. *Bonica's Management of Pain.* 4th ed. Baltimore, MD: Lippincott, Williams & Wilkins; 2010:1105-1122.
54. Leung L. From ladder to platform: a new concept for pain management. *J Prim Health Care.* 2012;4(3):254-258.
55. Chou R, Loeser JD, Owens DK, et al. Interventional therapies, surgery, and interdisciplinary rehabilitation for low back pain: an evidence-based clinical practice guideline from the American Pain Society. *Spine (Phila Pa 1976).* May 1 2009;34(10):1066-1077.
56. Chou R, Atlas SJ, Stanos SP, Rosenquist RW. Nonsurgical interventional therapies for low back pain: a review of the evidence for an American Pain Society clinical practice guideline. *Spine (Phila Pa 1976).* May 1 2009;34(10):1078-1093.
57. Mailis A, Taenzer P. Evidence-based guideline for neuropathic pain interventional treatments: spinal cord stimulation, intravenous infusions, epidural injections and nerve blocks. *Pain Res Manag.* May-Jun 2012;17(3):150-158.
58. Staal JB, de Bie RA, de Vet HC, Hildebrandt J, Nelemans P. Injection therapy for subacute and chronic low back pain: an updated Cochrane review. *Spine (Phila Pa 1976).* Jan 1 2009;34(1):49-59.
59. Patient-Centered Perianesthesia Communication, Practice Considerations. Park Ridge, IL: American Association of Nurse Anesthetists; 2014.
60. Infection Control Guide for Certified Registered Nurse Anesthetists. Park Ridge, IL: American Association of Nurse Anesthetists; 2012.
61. Safe Injection Guidelines for Needle and Syringe Use. Park Ridge, IL: American Association of Nurse Anesthetists; 2014.
62. Fink GE. Radiation safety in fluoroscopy for neuraxial injections. *AANA J.* Aug 2009;77(4):265-269.
63. Kline JP. Ultrasound guidance in anesthesia. *AANA J.* Jun 2011;79(3):209-217.
64. Jee H, Lee JH, Kim J, Park KD, Lee WY, Park Y. Ultrasound-guided selective nerve root block versus fluoroscopy-guided transforaminal block for the treatment of radicular pain in the lower cervical spine: a randomized, blinded, controlled study. *Skeletal Radiol.* Jan 2013;42(1):69-78.
65. Wald JT, Maus TP, Diehn FE, et al. CT-guided cervical transforaminal epidural steroid injections: Technical insights. *J Neuroradiol.* Jul 2014;41(3):211-215.
66. Wald JT, Maus TP, Geske JR, et al. Safety and efficacy of CT-guided transforaminal cervical epidural steroid injections using a posterior approach. *AJNR Am J Neuroradiol.* Mar 2012;33(3):415-419.

67. Evansa I, Logina I, Vanags I, Borgeat A. Ultrasound versus fluoroscopic-guided epidural steroid injections in patients with degenerative spinal diseases: A prospective, randomised study. *Eur J Anaesthesiol*. May 16 2014.
68. Guidelines for Core Clinical Privileges for Certified Registered Nurse Anesthetists. Park Ridge, IL: American Association of Nurse Anesthetists; 2005.
69. Continued Competency. Park Ridge, IL: American Association of Nurse Anesthetists.