MEDICAL CONTESTED CASE HEARING NO. 14045

DECISION AND ORDER

This case is decided pursuant to Chapter 410 of the Texas Workers' Compensation Act and the Rules of the Texas Department of Insurance, Division of Workers' Compensation. For the reasons discussed herein, the Hearing Officer determines that: (1) the preponderance of the evidence is not contrary to the decision of the IRO that Claimant is not entitled to Intrathecal Dilaudid Trial.

ISSUES

A contested case hearing was held on February 13, 2014, to decide the following disputed issue:

1. Is the preponderance of the evidence contrary to the decision of the Independent Review Organization (IRO) that the Claimant is not entitled to an intrathecal dilaudid trial?

PARTIES PRESENT

Petitioner/Claimant appeared and was assisted by PB, ombudsman. Respondent/Carrier appeared and was represented by BJ, attorney.

BACKGROUND INFORMATION

Evidence presented in the hearing revealed that Claimant sustained a compensable injury on (Date of Injury), while lifting a patient. Claimant had severe back pain with associated radiculopathy and subsequently underwent a lumbar laminectomy at L4, L5 and S1 with interbody fusion at L5-S1 on August 3, 2011. Claimant continues to complain of back pain with associated radicular component and has undergone physical therapy treatments, aquatic therapy, TENS unit, chiropractic treatment, epidural steroid injection and other nerve blocks without any success. Claimant had an MRI on 6/8/12 that showed unremarkable postoperative changes. Psychological evaluation cleared Claimant for an intrathecal pump on August 6, 2013. Claimant is presently on Norco 10/325 BID and baciofen 10 mg TID. Dr. AT, Claimant's treating physician recommended a trial intrathecal dilaudid.

The utilization review dated November 19, 2013, resulted in a denial for a trial intrathecal dilaudid.

Texas Labor Code Section 408.021 provides that an employee who sustains a compensable injury is entitled to all health care reasonably required by the nature of the injury as and when needed. Health care reasonably required is further defined in Texas Labor Code Section 401.011 (22a) as health care that is clinically appropriate and considered effective for the injured

employee's injury and provided in accordance with best practices consistent with evidence based medicine or, if evidence based medicine is not available, then generally accepted standards of medical practice recognized in the medical community. Health care under the Texas Workers' Compensation system must be consistent with evidence based medicine if that evidence is available. Evidence based medicine is further defined in Texas Labor Code Section 401.011 (18a) to be the use of the current best quality scientific and medical evidence formulated from credible scientific studies, including peer-reviewed medical literature and other current scientifically based texts and treatment and practice guidelines. The Commissioner of the Division of Workers' Compensation is required to adopt treatment guidelines that are evidence-based, scientifically valid, outcome-focused, and designed to reduce excessive or inappropriate medical care while safeguarding necessary medical care. Texas Labor Code Section 413.011(e). Medical services consistent with the medical policies and fee guidelines adopted by the commissioner are presumed reasonable in accordance with Texas Labor Code Section 413.017(1).

In accordance with the above statutory guidance, the Division of Workers' Compensation has adopted treatment guidelines by Division Rule 137.100. This rule directs health care providers to provide treatment in accordance with the current edition of the Official Disability Guidelines (ODG), and such treatment is presumed to be health care reasonably required as defined in the Texas Labor Code. Thus, the focus of any health care dispute starts with the health care set out in the ODG. Also, in accordance with Division Rule 133.308(s), "A decision issued by an IRO is not considered an agency decision and neither the Department nor the Division are considered parties to an appeal. In a Contested Case Hearing (CCH), the party appealing the IRO decision has the burden of overcoming the decision issued by an IRO by a preponderance of evidence-based medical evidence."

The pertinent provisions of the ODG applicable to this case are as follows, to wit:

Opioids

This topic is covered under multiple headings. See more specific entries, as follows: **Opioids, criteria for use**; Opioids for chronic pain; Opioids for neuropathic pain; Opioids for osteoarthritis; Opioids, cancer pain vs. nonmalignant pain; Opioids, dealing with misuse & addiction; Opioids, dosing; Opioids, indicators for addiction; Opioids, long-acting; Opioids, long-term assessment; Opioids, pain treatment agreement; Opioid provider outreach; Opioids, psychological intervention; Opioids, specific drug list; Opioids, screening for risk of addiction (tests); Opioids, state medical boards guidelines; Detoxification; Substance abuse (tolerance, dependence, addiction); Urine Drug Testing (UDT) in patient-centered clinical situations; Weaning of medications; Implantable drug-delivery systems (IDDSs); Methadone; Rapid detox; Testosterone replacement for hypogonadism (related to opioids); Opioid hyperalgesia; Opioid-induced constipation treatment; & Opioids, specific drug list. Opioid drugs are also referred to as opiate analgesics, narcotic analgesics, or schedule C (II -IV) controlled substances. Opioid analgesics are a class of drugs (e.g., morphine, codeine, and methadone) that have a primary

indication to relieve symptoms related to pain. Opioid drugs are available in various dosage forms and strengths. They are considered the most powerful class of analgesics that may be used to manage both acute and chronic pain. These medications are generally classified according to potency and duration of dosage duration.

Overall Classification:

Pure-agonists: include natural and synthetic opioids such as morphine sulfate (MS Contin®), hydromorphone (Dilaudid®), oxymorphone (Numorphan®), levorphanol (Levo-Dromoran®), codeine (Tylenol w/Codeine 3®), hydrocodone (Vicodin®), oxycodone (OxyContin®), methadone (Dolophine HCl®), and fentanyl (Duragesic®). This group of opioids does not have a ceiling effect for their analgesic efficacy nor do they antagonize (reverse) the effects of other pure opioids. (Baumann, 2002) Morphine is the most widely used type of opioid analgesic for the treatment of moderate to severe pain due to its availability, the range of doses offered, and its low cost.

Partial agonists-antagonists: agents that stimulate the analgesic portion of opioid receptors while blocking or having little or no effect on toxicity. This group of opiates includes buprenorphine (Suboxone®). Partial agonists-antagonists have lower abuse potential than pure-agonists, however the side effects of this class of analgesics include hallucinations and dysphoria. Opioid antagonists such as naloxone are included in this class. They are most often used to reverse the effects of agonists and agonist-antagonist derived opioids. (Baumann, 2002)

Mixed agonists-antagonists: another type of opiate analgesics that may be used to treat pain. They include such drugs as butorphanol (Stadol®), dezocine (Dalgan®), nalbuphine (Nubain®) and pentazocine (Talwin®). (Baumann, 2002) Mixed agonists-antagonists have limited use among chronic pain patients because of their ceiling effect for analgesia that results in the analgesic effect not increasing with dose escalation.

Central acting analgesics: an emerging fourth class of opiate analgesic that may be used to treat chronic pain. This small class of synthetic opioids (e.g., Tramadol) exhibits opioid activity and a mechanism of action that inhibits the reuptake of serotonin and norepinephrine. Central analgesics drugs such as Tramadol (Ultram®) are reported to be effective in managing neuropathic pain. (Kumar, 2003) Side effects are similar to traditional opioids.

Opioid Classifications: Short-acting/Long-acting opioids:

Short-acting opioids: also known as “normal-release” or “immediate-release” opioids are seen as an effective method in controlling both acute and chronic pain. They are often used for intermittent or breakthrough pain. These agents are often combined with other analgesics such as acetaminophen and aspirin. These adjunct agents may limit the upper range of dosing of short-acting agents due to their adverse effects. The duration of action is generally 3-4 hours. Short-acting opioids include Morphine (Roxanol®), Oxycodone (OxyIR®, Oxyfast®), Endocodone®, Oxycodone with acetaminophen, (Roxilox®, Roxicet®, Percocet®, Tylox®, Endocet®),

Hydrocodone with acetaminophen, (Vicodin®, Lorcet®, Lortab®, Zydone®, Hydrocet®, Norco®), Hydromorphone (Dilaudid®, Hydrostat®). (Baumann, 2002)

Long-acting opioids: also known as "controlled-release", "extended-release", "sustained-release" or "long-acting" opioids, are a highly potent form of opiate analgesic. The proposed advantage of long-acting opioids is that they stabilize medication levels, and provide around-the-clock analgesia. Long-acting opioids include: Morphine (MSContin®, Oramorph SR®, Kadian®, Avinza®), Oxycodone (Oxycontin®), Fentanyl (Duragesic Patch®), Hydromorphone (Palladone®). Note: On 01/26/10 Purdue Pharma suspended Palladone® from the US market due to adverse effects with alcohol. (FDA, 2010) The odds of being hypogonadal on long-acting opioids may be 4-5 times higher than the odds on a short-acting equipotent dose. (Rubinstein, 2012)

Opioids, criteria for use

CRITERIA FOR USE OF OPIOIDS

Therapeutic Trial of Opioids

(1) **Establish a Treatment Plan.** The use of opioids should be part of a treatment plan that is tailored to the patient. Questions to ask prior to starting therapy:

   (a) Are there reasonable alternatives to treatment, and have these been tried?

   (b) Is the patient likely to improve? Examples: Was there improvement on opioid treatment in the acute and subacute phases? Were there trials of other treatment, including non-opioid medications?

   (c) Has the patient received a screen for the risk of addiction? Is there likelihood of abuse or an adverse outcome? Specific questions about current use of alcohol, illegal drugs, other prescription drugs, and over-the counter drugs should be asked. Obtaining a history of personal and/or family substance abuse issues is important. See Substance abuse (tolerance, dependence, addiction). See Opioids, screening for risk of addiction. (Webster, 2008) (Ballyantyne, 2007)

   (d) Ask about Red Flags indicating that opioids may not be helpful in the chronic phase: (1) little or no relief with opioid therapy in the acute and subacute phases. (2) The patient has been given a diagnosis in one of the particular diagnostic categories that have not been shown to have good success with opioid therapy: conversion disorder; somatization disorder; pain disorder associated with psychological factors (such as anxiety or depression, or a previous history of substance abuse). Patients may misuse opioids prescribed for pain to obtain relief from depressed feelings, anxiety, insomnia, or discomforting memories. There are better treatments for this type of pathology. (Sullivan, 2006) (Sullivan, 2005) (Wilsey, 2008) (Savage, 2008)

   (e) When the patient is requesting opioid medications for their pain and inconsistencies are identified in the history, presentation, behaviors or physical findings, physicians and

surgeons who make a clinical decision to withhold opioid medications should document the basis for their decision.

(2) **Steps to Take Before a Therapeutic Trial of Opioids:**

(a) Attempt to determine if the pain is nociceptive or neuropathic. Also attempt to determine if there are underlying contributing psychological issues. Neuropathic pain may require higher doses of opioids, and opioids are not generally recommended as a first-line therapy for some neuropathic pain.

(b) A therapeutic trial of opioids should not be employed until the patient has failed a trial of non-opioid analgesics.

(c) Before initiating therapy, the patient should set goals, and the continued use of opioids should be contingent on meeting these goals.

(d) Baseline pain and functional assessments should be made. Function should include social, physical, psychological, daily and work activities, and should be performed using a validated instrument or numerical rating scale. See Function Measures.

(e) Pain related assessment should include history of pain treatment and effect of pain and function.

(f) Assess the likelihood that the patient could be weaned from opioids if there is no improvement in pain and function.

(g) The patient should have at least one physical and psychosocial assessment by the treating doctor (and a possible second opinion by a specialist) to assess whether a trial of opioids should occur. When subjective complaints do not correlate with imaging studies and/or physical findings and/or when psychosocial issue concerns exist, a second opinion with a pain specialist and a psychological assessment should be obtained. (Sullivan, 2006) (Sullivan, 2005) (Wilsey, 2008) (Savage, 2008) (Ballyantyne, 2007)

(h) The physician and surgeon should discuss the risks and benefits of the use of controlled substances and other treatment modalities with the patient, caregiver or guardian.

(i) A written consent or pain agreement for chronic use is not required but may make it easier for the physician and surgeon to document patient education, the treatment plan, and the informed consent. Patient, guardian, and caregiver attitudes about medicines may influence the patient's use of medications for relief from pain. See Guidelines for Pain Treatment Agreement. This should include the consequences of non-adherence.

(j) Consider the use of a urine drug screen to assess for the use or the presence of illegal drugs.

(3) **Initiating Therapy**

(a) Intermittent pain: Start with a short-acting opioid trying one medication at a time.

(b) Continuous pain: extended-release opioids are recommended. Patients on this modality may require a dose of “rescue” opioids. The need for extra opioid can be a guide to determine the sustained release dose required.

(c) Only change 1 drug at a time.

(d) Prophylactic treatment of constipation should be initiated.

(e) If partial analgesia is not obtained, opioids should be discontinued.

(4) **On-Going Management**. Actions Should Include:

(a) Prescriptions from a single practitioner taken as directed, and all prescriptions from a single pharmacy.

(b) The lowest possible dose should be prescribed to improve pain and function.

(c) Office: Ongoing review and documentation of pain relief, functional status, appropriate medication use, and side effects. Pain assessment should include: current pain; the least reported pain over the period since last assessment; average pain; intensity of pain after taking the opioid; how long it takes for pain relief; and how long pain relief lasts. Satisfactory response to treatment may be indicated by the patient's decreased pain, increased level of function, or improved quality of life. Information from family members or other caregivers should be considered in determining the patient's response to treatment. *The 4 A's for Ongoing Monitoring:* Four domains have been proposed as most relevant for ongoing monitoring of chronic pain patients on opioids: pain relief, side effects, physical and psychosocial functioning, and the occurrence of any potentially aberrant (or nonadherent) drug-related behaviors. These domains have been summarized as the "4 A's" (analgesia, activities of daily living, adverse side effects, and aberrant drug-taking behaviors). The monitoring of these outcomes over time should affect therapeutic decisions and provide a framework for documentation of the clinical use of these controlled drugs. (Passik, 2000)

(d) Home: To aid in pain and functioning assessment, the patient should be requested to keep a pain dairy that includes entries such as pain triggers, and incidence of end-of-dose pain. It should be emphasized that using this diary will help in tailoring the opioid dose. This should not be a requirement for pain management.

(e) Use of drug screening or inpatient treatment with issues of abuse, addiction, or poor pain control. (Webster, 2008)

(f) Documentation of misuse of medications (doctor-shopping, uncontrolled drug escalation, drug diversion).

(g) Continuing review of overall situation with regard to nonopioid means of pain control.

(h) Consideration of a consultation with a multidisciplinary pain clinic if doses of opioids are required beyond what is usually required for the condition or pain does not improve on opioids in 3 months. Consider a psych consult if there is evidence of depression, anxiety

or irritability. Consider an addiction medicine consult if there is evidence of substance misuse. (Sullivan, 2006) (Sullivan, 2005) (Wilsey, 2008) (Savage, 2008) (Ballyantyne, 2007)

(5) **Recommended Frequency of Visits While in the Trial Phase (first 6 months):**

(a) Every 2 weeks for the first 2 to 4 months

(b) Then at approximate 1 ½ to 2-month intervals

Note: According to the California Medical Board Guidelines for Prescribing Controlled Substances for Pain, patients with pain who are managed with controlled substances should be seen monthly, quarterly, or semiannually as required by the standard of care. (California, 1994)

(6) **When to Discontinue Opioids:** See Opioid hyperalgesia. Also see Weaning of Medications. Prior to discontinuing, it should be determined that the patient has not had treatment failure due to causes that can be corrected such as under-dosing or inappropriate dosing schedule. Weaning should occur under direct ongoing medical supervision as a slow taper except for the below mentioned possible indications for immediate discontinuation. The patient should not be abandoned.

(a) If there is no overall improvement in function, unless there are extenuating circumstances

(b) Continuing pain with the evidence of intolerable adverse effects; lack of significant benefit (persistent pain and lack of improved function despite high doses of opiates- e.g. > 120 mg/day morphine equivalents)

(c) Decrease in functioning

(d) Resolution of pain

(e) If serious non-adherence is occurring

(f) The patient requests discontinuing

(g) Immediate discontinuation has been suggested for: evidence of illegal activity including diversion, prescription forgery, or stealing; the patient is involved in a motor vehicle accident and/or arrest related to opioids, illicit drugs and/or alcohol; intentional suicide attempt; aggressive or threatening behavior in the clinic. It is suggested that a patient be given a 30-day supply of medications (to facilitate finding other treatment) or be started on a slow weaning schedule if a decision is made by the physician to terminate prescribing of opioids/controlled substances.

(h) Many physicians will allow one “slip” from a medication contract without immediate termination of opioids/controlled substances, with the consequences being a re-discussion of the clinic policy on controlled substances, including the consequences of repeat violations.

(i) If there are repeated violations from the medication contract or any other evidence of abuse, addiction, or possible diversion it has been suggested that a patient show evidence

of a consult with a physician that is trained in addiction to assess the ongoing situation and recommend possible detoxification. (Weaver, 2002)

(j) When the patient is requesting opioid medications for their pain and inconsistencies are identified in the history, presentation, behaviors or physical findings, physicians and surgeons who make a clinical decision to withhold opioid medications should document the basis for their decision.

(k) Routine long-term opioid therapy is not recommended, and ODG recommends consideration of a one-month limit on opioids for new chronic non-malignant pain patients in most cases, as there is little research to support use. The research available does not support overall general effectiveness and indicates numerous adverse effects with long-term use. The latter includes the risk of ongoing psychological dependence with difficultly weaning. See Opioids for chronic pain.

(7) **When to Continue Opioids**

(a) If the patient has returned to work

(b) If the patient has improved functioning and pain

(Washington, 2002) (Colorado, 2002) (Ontario, 2000) (VA/DoD, 2003) (Maddox-AAPM/APS, 1997) (Wisconsin, 2004) (Warfield, 2004)

Opioids for back pain

See Opioids for chronic pain.

Opioids for chronic pain

Not recommended as a first-line treatment for chronic non-malignant pain, and not recommended in patients at high risk for misuse, diversion, or substance abuse. Recommended as a 2nd or 3rd line treatment option at doses ≤ 120 mg daily oral morphine equivalent dose (MED) as indicated below. Risk-benefit of use should be carefully weighed for substance abuse and overdose risks, including risk of death, and this information should be provided to the patient as part of informed decision-making. Extreme caution is required for any opioid use in patients with the following:

(1) Individuals with a high risk for misuse or diversion;
(2) Individuals with evidence of substance abuse issues;
(3) Individuals with a family history of substance abuse;
(4) Individuals with underlying psychiatric disease.

An accurate diagnosis should be established. At the minimum, screening for opioid risk and psychological distress inventories should occur before starting this class of drugs and a psychological evaluation is strongly recommended. Escalation of doses beyond 120 mg MED should be done with caution, and generally under the care of pain specialists. In certain cases, addiction specialists may need to evaluate patients, with the understanding that many patients

who progress to chronic opioid therapy have underlying psychiatric disease and substance abuse issues. While long-term opioid therapy may benefit some patients with severe suffering that has been refractory to other medical and psychological treatments, it is not generally effective in achieving the original goals of complete pain relief and functional restoration. For patients now on high opioid doses who are not benefiting from them, if taken off the medications many would experience severe withdrawal or have to take addiction treatment drugs for years. See Weaning of medications. To prevent new patients from getting caught in this cycle, ODG recommends consideration of a one-month limit on opioids for new chronic non-malignant pain patients in most cases.

Use for specific disease states

- Neuropathic pain: Opioids have been suggested for neuropathic pain that has not responded to first-line recommendations (antidepressants, anticonvulsants). There are no trials of long-term use. There are virtually no studies of opioids for treatment of chronic lumbar root pain with resultant neuropathy. See Opioids for neuropathic pain, where opioids are not recommended as a first-line therapy.

- *Chronic back pain*: Opioids appear to be efficacious but should be limited for short-term pain relief in patients with acute low back pain. Long-term efficacy is unclear (>16 weeks), and there is also limited evidence for the use of opioids for chronic low back pain. (Martell-*Annals*, 2007) (White, 2011) (Franklin, 2009) Failure of activity level to respond to a time-limited course of opioids has led to the suggestion of reassessment and consideration of alternative therapy. There is no evidence to recommend one opioid over another. In patients taking opioids for back pain, the prevalence of lifetime substance use disorders has ranged from 36% to 56% (a statistic limited by poor study design). Limited information indicates that up to one-fourth of patients who receive opioids exhibit aberrant medication-taking behavior. (Martell-*Annals*, 2007) (Chou, 2007) There are three studies comparing tramadol to placebo that have reported pain relief, but this did not necessarily improve function. (Deshpande, 2007) See also the Low Back Chapter for recommendations in acute pain, where opioids are not recommended except for short use for severe cases, not to exceed 2 weeks.

- Headaches: Not recommended, in particular, due to the risk of medication overuse headache. (Lake, 2008) (Olesen, 2006) See Medication overuse headache.
- Osteoarthritis: Not recommended as a first-line therapy. Recommended on a trial basis for short-term use after there has been evidence of failure of first-line medication options such as acetaminophen or NSAIDs when there is evidence of moderate to severe pain. Also recommended for a trial if there is evidence of contraindications for use of first-line medications. There is a lack of evidence to allow for a treatment recommendation for long-term use. If used on a long-term basis, the criteria for use of opioids should be followed. See Opioids for osteoarthritis for citations. The American College of Rheumatology guidelines do not recommend

opioids for osteoarthritis, except in patients who should have total joint arthroplasty but cannot. (Hochberg, 2012)

- Nociceptive pain: Recommended as the standard of care for treatment of moderate or severe nociceptive pain (defined as pain that is presumed to be maintained by continual injury, with the most common example being pain secondary to cancer).
- Mechanical and compressive etiologies: rarely beneficial.

Evidence for use: A major concern about the use of opioids for chronic pain is that most randomized-controlled trials are limited to a short-term period (1 to 6 months), with high rates of dropout due to adverse effects and/or lack of efficacy (as high as 60%). Studies usually exclude patients with mental health disease or substance abuse, limiting generalizability. Methodological issues result in limitations, with problems of studies including insufficiently comprehensive outcome assessment, and incomplete inclusion of adverse effects. Results suggest modest pain relief compared to placebo (approximately 30%), but there are no long-term studies to determine if pain relief is maintained. Overall, the safety of long-term use has not been adequately studied, and some nonrandomized prospective studies suggest opioid treatment may actually retard functional recovery. This leads to a concern about confounding issues such as tolerance, opioid-induced hyperalgesia, long-range adverse effects such as hypogonadism and/or opioid abuse, and the influence of placebo as a variable for treatment effect. (Eriksen, 2006) (Ballantyne, 2006) (Furlan, 2006) (Ballantyne, 2008) (Franklin, 2008) (Chou, 2009) (Chapman, 2010) (Papaleontiou, 2010) (Furlan, 2010) (Von Korff, 2011) (Manchikanti, 2011)

Upper limits of range of dose: The Washington State Department of Labor and Industries Guidelines suggest that the "upper limit of range" for opioids prior to evaluation with a pain specialist for the need for possible continuation of treatment, escalation of dose, or possible weaning, is 120 mg of oral morphine equivalents a day (MED). These values are based on factors such as evidence of increased risk of alcohol- or drug-related encounters (alcohol or drug intoxication, alcohol or drug withdrawal, or alcohol or drug overdose) at higher doses. Risk increases with a history of previous or ongoing substance abuse and concomitant use of opioids with sedative hypnotics and/or benzodiazepines. Progression to long-term use also increases with prescribing of higher doses of opioids. Other cohort studies have indicated lower rates of return to work, higher rate of healthcare utilization, and higher rates of going on to receive Social Security Disability Income with higher doses of opioids. With the introduction of a definition of high dose of opioids as ≥ 120 mg by the Washington State workers' compensation system, there was a 27% decrease in average morphine equivalents a day dispensed, a 35% decrease in the number of patients receiving > 120 mg/day of morphine equivalents (both compared to before 2007), and a 50% decrease in number of unintentional opioid deaths (2009-2010). (Ballantyne, 2006) (AMDG, 2007) (Kidner, 2009) (Kidner, 2010) (Braden, 2009) (Braden, 2010) (Dunn, 2010) (Bohnert, 2011) (Martin, 2011) (Franklin, 2012) See Opioids, dosing (morphine equivalent dose).

Patients most likely to receive high-dose opioids: Cohort studies indicate that small proportions of patients are most likely to receive the majority of opioids (in one study 5% of patients received 70% of opioids dispensed). Patients most likely to receive high-dose opioids in cohort studies are those who have multiple pain complaints, and have mental health and substance use disorders. These are generally patients who are excluded from randomized trials of opioids, which limit the generalizability of current studies. They are also more likely to be receiving concomitant benzodiazepines. Studies show these patients are more likely to have higher rates of medical diagnoses and higher Charlson comorbidity scores. (Sullivan, 2005) (Braden, 2009) (Edlund 2010) (Morasco, 2010) (Kidner, 2010) (Sullivan, 2012)

Risk factors for progressing to long-term opioid use: It is currently suggested that of the patients that proceed to long-term opioid use (90 days or more), two-thirds continue opioids for years later, creating life-long therapy. Current research involves evaluating what subsets of patients are likely to proceed to long-term use, particularly as

(1) the vast majority of patients in randomized-controlled studies abandon opioids after short-term use due to adverse effects and/or lack of efficacy and
(2) a small proportion of patients receive the majority of opioids dispensed.

Subclasses of individuals who continue with long-term use have been identified as patients who use high daily doses (>120 mg morphine equivalent/day) and/or have a history of opioid misuse. The likelihood of receiving long-term opioids increases with number of pain sites, increased baseline pain, decreased baseline function, number of medical diagnoses, nicotine dependence, psychiatric diagnoses, lower self-reported mental health, fear avoidance beliefs, and lower certainty of return to work in the next six months. The most likely mental health diagnoses are anxiety disorder and post-traumatic stress disorder. It is suggested that long-term opioids are often unknowingly being used to treat the sequelae of both physical and psychological trauma. This is based on theories of endogenous opioid system disruption. (Sullivan, 2005) (Webster, 2007) (Dersh, 2007) (Dersh, 2008) (Weisner, 2009) (Braden, 2009) (Franklin, 2009) (Edlund 2010) (Morasco, 2010) (Martin, 2011) (Sullivan, 2012)

Adverse effects: These include serious fractures, sleep apnea, hyperalgesia, immunosuppressant, chronic constipation, bowel obstruction, myocardial infarction, and tooth decay due to xerostomia. Neuroendocrine problems include hypogonadism, erectile dysfunction, infertility, decreased libido, osteoporosis, and depression. Men taking opioids, especially high doses and over several months, are about 50% more likely to fill a prescription for erectile dysfunction (ED), according to a study of over 11,000 men. (Deyo, 2013)

Risk of overdose: Since 2003, more overdose deaths have involved prescription opioid analgesics than heroin or cocaine combined. The CDC estimates that in 2008 there were almost 100 drug overdose deaths a day (in numbers nearing that of deaths from motor vehicle accidents). Opioid pain relievers accounted for 73.8% of deaths, with prescription drugs accounting for the largest increase in deaths. (MMWR, 2011) The risk of overdose increases when opioids are used with other drugs (such as benzodiazepines, cocaine, and/or heroin) or alcohol. Other risk factors

include a history of substance abuse and/or of mental health disorder. The CDC states that the two main populations at risk for overdose are the approximate 9 million individuals who report long-term use of opioids, and the 5 million individuals who report non-medical use of this class of drugs. The CDC also reports increased risk for individuals on high doses of daily opioids (defined as > 100 mg of oral morphine equivalents a day) who seek care from multiple providers. Individuals with these characteristics were found to represent 40% of overdose deaths. Another concern is that this is a group of individuals who are likely to divert drugs. Statewide data has found that 25% to 66% of those who die of pharmaceutical overdose were taking drugs prescribed to someone else. (Mirakbari, 2003) (CDC, 2012) (CDC, 2011) (Webster, 2011). (Gomes, 2011) (Dunn, 2010) (Bohnert, 2011) (Bohnert 2012)

Concomitant use with other medications: Benzodiazepines and other sedative drugs: Benzodiazepines are commonly implicated in opioid overdose deaths and they lower the lethal opioid dose. Consideration of tapering the use of sedative hypnotics and benzodiazepines before starting opioid use if possible is strongly recommended. (Mirakbari, 2003) (Kahan, 2011) (Gomes, 2011) (Toblin 2010)

Outcomes measures: It is now suggested that rather than simply focus on pain severity, improvements in a wide range of outcomes should be evaluated, including measures of functioning, appropriate medication use, and side effects. Measures of pain assessment that allow for evaluation of the efficacy of opioids and whether their use should be maintained include the following: current pain; the least reported pain over the period since last assessment; average pain; intensity of pain after taking the opioid; how long it takes for pain relief; and how long pain relief lasts. (Nicholas, 2006) (Ballantyne, 2006)

Tolerance and addiction: Opioid tolerance develops with the repeated use of opioids and brings about the need to increase the dose and may lead to sensitization. It is now clear that analgesia may not occur with open-ended escalation of opioids. It has also become apparent that analgesia is not always sustained over time, and that pain may be improved with weaning of opioids. (Ballantyne, 2006) (Ballantyne, 2003) See Substance abuse (tolerance, dependence, addiction).

Behavior reinforcement: A major concern in the use of opioids has been that a focus on this treatment without coordination with other modalities, such as psychosocial or behavioral therapy, may simply reinforce pain-related behavior, ultimately undermining rehabilitation that has been targeted at functional restoration. (Ontario, 2000) It has been shown that pain behavior can be reinforced by the prescribing of opioids, generally on an unintentional basis by the patient. (Fordyce, 1991)

Overall treatment suggestions: Current guidelines suggest the following:

- A trial of opioids for chronic pain as a first step in treatment for appropriate conditions that have not responded to other interventions after careful screening and patient informed consent. The steps involved are outlined in the Criteria for Use of

Opioids. The trial includes an initiation phase that involves selection of the opioid and initial dose.

- There is then a titration phase that includes dose adjustment. At this phase it may be determined that opioids are not achieving the desired outcomes, and they should be discontinued.
- The final stage is the maintenance phase. If pain worsens during this phase the differential to evaluate includes disease progression, increased activity, and/or new or increased pre-existing psychosocial factors that influence pain. In addition, the patient may develop hyperalgesia, tolerance, dependence or actual addiction.

(Washington, 2002) (Colorado, 2002) (Ontario, 2000) (VA/DoD, 2003) (Maddox-AAPM/APS, 1997) (Wisconsin, 2004) (Warfield, 2004) (VA/DOD, 2010) See Substance abuse (tolerance, dependence, addiction). See also Implantable pumps for narcotics. See also Opioids in the Low Back Chapter. See Criteria for Use of Opioids.

Opioids for neuropathic pain

Not recommended as a first-line therapy but recommended (along with tramadol) for second-line treatment (alone or in combination with first-line drugs). A recent consensus guideline stated that opioids could be considered first-line therapy for the following circumstances:

(1) prompt pain relief while titrating a first-line drug;
(2) treatment of episodic exacerbations of severe pain;
(3) treatment of acute neuropathic pain; &
(4) treatment of neuropathic cancer pain.

(Dworkin, 2007) See Opioids for chronic pain.

Gaps in evidence based research: Most pharmacotherapy trials on neuropathic pain have investigated painful diabetic peripheral neuropathy or postherpetic neuralgia for short-term periods (6 to 12 weeks). There are few studies on treatment of chronic lumbar root pain, with those available showing limited effectiveness to opioids. (Khoromi, 2007) Extrapolation of these results to other painful neuropathic conditions such as complex regional pain syndrome, spinal cord injury, cancer invasion, or surgery-induced peripheral neuropathy may or may not be successful. There are few head-to-head randomized controlled trials comparing different treatments or combination therapies. Differences in study designs make comparisons difficult.

Consideration of risks and side effects: Opioids are considered a second-line treatment for several reasons:

(1) head-to-head comparisons have found that opioids produce more side effects than TCAs and gabapentin;
(2) long-term safety has not been systematically studied;
(3) long-term use may result in immunological and endocrine problems (including hypogonadism);
(4) treatment may be associated with hyperalgesia; &

(5) opioid use is associated with misuse/abuse.

Opioids may be a safer choice for patients with cardiac and renal disease than antidepressants or anticonvulsants. (Namaka, 2004) (Finnerup, 2005) (Finnerrup, 2007) (Wu, 2008) (Eisenberg-*Cochrane*, 2006) (Eisenberg-*JAMA*, 2005) (Attal, 2006) (Attal, 2010) (de Leon-Casasola, 2011) (Dworkin, 2010) (Finnerup, 2010) (Moulin, 2007) (O'Connor, 2009)

Opioids for osteoarthritis

Not recommended as a first-line therapy for osteoarthritis.

Short-term use: Recommended on a trial basis for short-term use after there has been evidence of failure of first-line non-pharmacologic and medication options (such as acetaminophen or NSAIDs) and when there is evidence of moderate to severe pain. Also recommended for a trial if there is evidence of contraindications for use of first-line medications. Weak opioids should be considered at initiation of treatment with this class of drugs (such as Tramadol, Tramadol/acetaminophen, hydrocodone and codeine), and stronger opioids are only recommended for treatment of severe pain under exceptional circumstances (oxymorphone, oxycodone, hydromorphone, fentanyl, morphine sulfate). Benefits of opioids are limited by frequent side effects (including nausea, constipation, dizziness, somnolence and vomiting). (Stitik, 2006) (Avouac, 2007) (Zhang, 2008)

Long-term use: Under study for long-term use as there are no long-term trials. There is therefore a lack of evidence to allow for a treatment recommendation. If used on a long-term basis, the criteria for use of opioids should be followed. See Opioids, criteria for use.

Opioids in general: A recent meta-analysis found that opioids were more effective than placebo for reducing pain intensity. The benefit for physical function was small and was considered questionable for clinical relevance. Lack of benefit for function may be due to lack of anti-inflammatory effect for this class of medications and presence of side effects such as dizziness and drowsiness. Adverse events in general may limit the benefit of opioids as this same study found that out of every five patients that received opioids, one discontinued the medication due to an adverse event. These adverse events included epigastric pain, nausea, vomiting, constipation, dry mouth, dizziness, somnolence and headache. Weaker opioids were found to be less likely to produce adverse effects than stronger opioids such as oxycodone, Fentanyl or morphine. No conclusion can be made on how opioids compare to other available pharmacologic treatment due to limited studies. (Avouac, 2007) Nontramadol opioids should not be routinely used for osteoarthritis even if pain is severe, according to the results of a recent systematic review. The small to moderate beneficial effects of non-tramadol opioids are outweighed by large increases in the risk of adverse events. Clinicians are advised to use non-tramadol opioids cautiously and to consider alternatives, such as surgery, the authors conclude. In addition, clinicians should inform patients about the substantial risks and only moderate benefits of opioid treatment and therapeutic alternatives. (Nüesch-*Cochrane*, 2009) Results of a new study show different risk profiles for the 5 most common opioids used for noncancer pain in older adults,

including increased risk for cardiovascular events observed after 6 months in codeine users and an increased risk for all-cause mortality after only 30 days in codeine and oxycodone users. The study found the following all-cause mortality rates after 30 days of use compared to Hydrocodone: Codeine 2.05; Oxycodone 2.43; Propoxyphene 1.09; & Tramadol 1.31. (Solomon, 2010)

Specific Opioids: Tramadol: A recent Cochrane review found that this drug decreased pain intensity, produced symptom relief and improved function for a time period of up to three months but the benefits were small (a 12% decrease in pain intensity from baseline). Adverse events often caused study participants to discontinue this medication, and could limit usefulness. There are no long-term studies to allow for recommendations for longer than three months. (Cepeda, 2006) Similar findings were found in an evaluation of a formulation that combines immediate-release vs. extended release Tramadol. Adverse effects included nausea, constipation, dizziness/vertigo and somnolence. (Burch, 2007)

Opioids, cancer pain vs. nonmalignant pain

Definition. The use of opioids is well accepted in treating cancer pain, where nociceptive mechanisms are generally present due to ongoing tissue destruction, expected survival may be short, and symptomatic relief is emphasized more than functional outcomes. In chronic non-malignant pain, by contrast, tissue destruction has generally ceased. Expected survival in chronic pain is relatively long and return to a high level of function is a major goal of treatment. Therefore, approaches to pain developed in the context of malignant pain may not be transferable to chronic non-malignant pain. See Opioids for chronic pain.

Opioids, dealing with misuse & addiction (plus aberrant behaviors & abuse)

Recommend that if a patient exhibits aberrant behaviors these concerns should be addressed immediately. See Opioids, indicators for addiction and misuse. A consult with a specialist in addiction (which in some communities may include a pain management specialist with training in this area) is recommended if there is suspicion or actual evidence of the spectrum of aberrant behavior to addiction with scheduled drug use. It is recommended that clinicians prescribing scheduled drugs known for dependency develop exit strategies for discontinuing these drugs in cases of the above pathology. This should include becoming familiar with available specialists to enlist in evaluation and treatment for these behaviors, particularly when the prescribing clinician does not have training in diagnosing and treating substance use disorders. It has been suggested that most chronic pain problems will not resolve while there is active and ongoing alcohol, illicit drug, or prescription drug abuse. (Weaver, 2002) In addition, it is not possible to diagnose or treat Axis I/II disorders that often co-occur in chronic pain patients who are experiencing active substance abuse disorder. Some physicians will allow one “slip” from a medication agreement depending upon the severity of the non-compliant behavior, without immediate termination of opioids/controlled substances, with the consequences being a re-discussion of the clinic policy on controlled substances, including the consequences of repeat violations. If there are repeated violations from the medication agreement or any other evidence of abuse, addiction, or possible

diversion, it has been suggested that a patient show evidence of consultation with a physician trained in addiction treatment for assessment of the situation and possible detoxification. Again, in some communities, this specialist may include a pain management clinician with training in this area. It is also suggested that a patient be given a 30-day supply of medications (to facilitate finding other treatment) or be started on a slow weaning schedule if a decision is made by the physician to terminate prescribing of opioids/controlled substances. (Weaver, 2002) In situations where there is dual diagnosis of opioid dependence and intractable pain, both of which are being treated with controlled substances, protections apply to California physicians and surgeons who prescribe controlled substances for intractable pain provided the physician complies with the requirements of the general standard of care and California Business and Professions Code section 2241.5. (California, 1994) See also Opioids, risk evaluation & mitigation strategy (REMS).

Recommendations for monitoring for aberrant behaviors, misuse, abuse and addiction:

(a) Make sure there is no change in the patient's condition that has introduced a need for additional treatment.

(b) Initiate an opioid therapy agreement if one is not in place or re-review the clinic policy if an agreement is in place. See Guidelines for opioid pain treatment agreement.

(c) Limit prescribing and filling of prescriptions to one pharmacy.

(d) In cases of strong suspicion or active evidence of abuse, limit the amount of meds prescribed at any one time and prescribe meds that are less rewarding and have lower street value.

(e) Obtain urine drug screens according to risk assessment. See Urine drug testing.

(f) Frequently evaluate clinical history. Include questions about cravings for the former substance of abuse (a potential early sign of relapse) if this is indicated.

(g) Frequently review medications with use of electronic medical record evaluation, prescription drug monitoring reports when available, and pill counts (brought in the original bottle from the pharmacy).

(h) Communicate with pharmacists if indicated.

(i) Communicate with previous providers and other current providers, with evidence of obtaining medical records. (It has been recommended that opioids should not be prescribed on a first visit until this step has been undertaken.)

(j) Evidence of participation in a recovery program (12-step or follow-up with a substance abuse counselor) is recommended for patients with evidence of active abuse or those with a history of addiction.

(k) Establish goals of treatment that can be realistically achieved.

(l) Initiate appropriate non-opioid adjunct medications and exercise programs.

(m) Utilize careful documentation, and in particular, that which is recommended in the State in which opioids are prescribed.

(n) Incorporate family and friends for support and education.

(Weaver, 2002) (Chabel, 1997) (Michna, 2004)

Opioids, dosing

Recommend that dosing not exceed 120 mg oral morphine equivalents per day. Opioids may be recommended as a 2nd or 3rd line treatment at doses ≤ 120 mg daily oral morphine equivalent dose (MED). See Opioids for chronic pain. Risk benefit of use should be evaluated, including that of substance abuse and death. An accurate diagnosis should be established and it is strongly recommended that a psychological evaluation occur before starting this class of drugs. Escalation of doses greater that 120 mg (MED) should be done with caution, and generally under the care of pain specialists, and in certain cases, addiction specialists, with the understanding that many patients who progress to chronic opioid therapy have underlying psychiatric disease and substance abuse issues. Different formulations of opioids can be compared in terms of doses by converting to morphine equivalents. The table below lists standard conversion factors although there are drawbacks to equivalency tables because they do not consider a recommended dose reduction for opioid cross-tolerance. The Washington State Agency Medical Director's Group guidelines include a convenient opioid conversion table. (AMDG, 2007)

Methadone: Methadone conversion requires careful consideration because of its long half-life and unusual pharmacokinetic profile compared with most other opioids. In addition, converting methadone to morphine is not bidirectional. When switching from an established dose of methadone to another opioid, we must consider that measurable methadone serum levels will be around for days, so both drugs are now readily available, increasing the overall risk for opioid toxicity. (Fudin, 2008)

The dosing limit recommendation is not a specific tipping point for the risk for overdose, but it is a place to stop and consider the risks of higher dosing. There are nothing specific about 100 or 125 mg, but the principle behind it is that at the higher doses there is less efficacy and more adverse effects. The opioid dose categories above 100 mg and up to 200 mg had an unadjusted relative risk for overdose of 1.15, whereas the risk in the 50 mg to <100 mg category was 1.61. However, after adjustment for opioid type, age, and sedative/hypnotic use, the relative risks declined to 0.87 and 0.81, respectively. The highest dose category (>350 mg) compared with the lowest dose category (<50 mg) showed an adjusted relative risk of 1.17. Patients who also had prescriptions for sedative or hypnotic agents, such as benzodiazepines, showed a significantly greater dose-risk response. (Gitlow, 2013)

Opioid Dosing Calculator

Morphine Equivalent Dose (MED) factor:

Codeine - 0.15
Fentanyl transdermal (in mcg/hr) - 2.4

Hydrocodone - 1
Hydromorphone - 4
Methadone, 41 to 60mg per day - 10
Methadone, >60mg per day - 12
Morphine - 1
Oxycodone - 1.5
Oxymorphone - 3
Tapentadol - 0.367
Tramadol - 0.2

Opioids, indicators for addiction

See Opioids, indicators for addiction & misuse.

Opioids, indicators for addiction & misuse

Recommend screening for indicators below.

Indicators and predictors of possible misuse of controlled substances and/or addiction:

(1) Adverse consequences:
   (a) Decreased functioning,
   (b) Observed intoxication,
   (c) Negative affective state
(2) Impaired control over medication use:
   (a) Failure to bring in unused medications,
   (b) Dose escalation without approval of the prescribing doctor,
   (c) Requests for early prescription refills,
   (d) Reports of lost or stolen prescriptions,
   (e) Unscheduled clinic appointments in “distress”,
   (f) Frequent visits to the ED,
   (g) Family reports of overuse of intoxication
(3) Craving and preoccupation:
   (a) Non-compliance with other treatment modalities,
   (b) Failure to keep appointments,
   (c) No interest in rehabilitation, only in symptom control,
   (d) No relief of pain or improved function with opioid therapy,
   (e) Overwhelming focus on opioid issues.
(4) Adverse behavior:
   (a) Selling prescription drugs,
   (b) Forging or modifying prescriptions,

(c) Stealing drugs,

(d) Using prescription drugs in ways other than prescribed (such as injecting oral formulations, chewing long acting agents or using prescribed opioids for other conditions),

(e) Concurrent use of alcohol or other illicit drugs (as detected on urine screens),

(f) Obtaining prescription drugs from non-medical sources,

(g) obtaining opioids from multiple physicians.

(Wisconsin, 2004) (Michna, 2004) (Chabal, 1997) (Portenoy, 1997)

Opioid-induced constipation treatment

Recommended as indicated below. In the section, Opioids, criteria for use, if prescribing opioids has been determined to be appropriate, then ODG recommends, under Initiating Therapy, that Prophylactic treatment of constipation should be initiated. Opioid-induced constipation is a common adverse effect of long-term opioid use because the binding of opioids to peripheral opioid receptors in the gastrointestinal (GI) tract results in absorption of electrolytes, such as chloride, with a subsequent reduction in small intestinal fluid. Activation of enteric opioid receptors also results in abnormal GI motility. Constipation occurs commonly in patients receiving opioids and can be severe enough to cause discontinuation of therapy.

First-line: When prescribing an opioid, and especially if it will be needed for more than a few days, there should be an open discussion with the patient that this medication may be constipating, and the first steps should be identified to correct this. Simple treatments include increasing physical activity, maintaining appropriate hydration by drinking enough water, and advising the patient to follow a proper diet, rich in fiber. These can reduce the chance and severity of opioid-induced constipation and constipation in general. In addition, some laxatives may help to stimulate gastric motility. Other over-the-counter medications can help loosen otherwise hard stools, add bulk, and increase water content of the stool.

Second-line: If the first-line treatments do not work, there are other second-line options. About 20% of patients on opioids develop constipation, and some of the traditional constipation medications don't work as well with these patients, because the problem is not from the gastrointestinal tract but from the central nervous system, so treating these patients is different from treating a traditional patient with constipation. An oral formulation of methylnaltrexone (Relistor®) met the primary and key secondary end points in a study that examined its effectiveness in relieving constipation related to opioid use for noncancer-related pain. The effectiveness of oral methylnaltrexone in this study was comparable to that reported in clinical studies of subcutaneous methylnaltrexone in subjects with chronic noncancer-related pain. There was an 80% improvement in response with the 450 mg dose and a 55% improvement with 300 mg. Constipation drug lubiprostone (Amitiza®) shows efficacy and tolerability in treating opioid-induced constipation without affecting patients' analgesic response to the pain medications. Lubiprostone is a locally acting chloride channel activator that has a distinctive

mechanism that counteracts the constipation associated with opioids without interfering with the opiates binding to their target receptors. (Bader, 2013) (Gras-Miralles, 2013) See also Tapentadol (Nucynta™), which has improved gastrointestinal tolerability for patients complaining of constipation, nausea, and/or vomiting.

Opioids, long-acting

Not generally recommended for first-line use. See Opioids for chronic pain, where opioids are not recommended as a first-line treatment for chronic non-malignant pain, while immediate-release opioids may be appropriate for short use for severe acute pain, not to exceed 2 weeks. However, the distinction between time-release characteristics may be less important than choosing the appropriate form and active ingredient in minimizing risk of abuse, overdose and adverse effects. In September 2013 the FDA announced labeling changes to reflect that extended-release and long-acting opioids are no longer indicated for merely moderate pain. Previously, the labels for ER/LA opioid analgesics stated that they were indicated for moderate to severe pain in patients requiring continuous, around-the-clock opioid treatment for an extended period of time. The labels now will state that the drugs are indicated for the management of pain severe enough to require daily, around-the-clock opioid treatment and for which alternative treatments are inadequate, and the FDA will require manufacturers to perform more studies and clinical trials to further assess the known risks of misuse, abuse, hyperalgesia, addiction, overdose, and death. However, the FDA did not take action on dose and duration limits, as had been suggested by stakeholders. (FDA, 2013)

Opioids, long-term assessment

CRITERIA FOR USE OF OPIOIDS

Long-term Users of Opioids (6-months or more)

(1) **Re-assess**

(a) Has the diagnosis changed?

(b) What other medications is the patient taking? Are they effective, producing side effects?

(c) What treatments have been attempted since the use of opioids? Have they been effective? For how long?

(d) Document pain and functional improvement and compare to baseline. Satisfactory response to treatment may be indicated by the patient's decreased pain, increased level of function, or improved quality of life. Information from family members or other caregivers should be considered in determining the patient's response to treatment. Pain should be assessed at each visit, and functioning should be measured at 6-month intervals using a numerical scale or validated instrument.

(e) Document adverse effects: constipation, nausea, vomiting, headache, dyspepsia, pruritus, dizziness, fatigue, dry mouth, sweating, hyperalgesia, sexual dysfunction, and sedation.

(f) Does the patient appear to need a psychological consultation? Issues to examine would include motivation, attitude about pain/work, return-to-work, social life including interpersonal and work-related relationships.

(g) Is there indication for a screening instrument for abuse/addiction? See Substance Abuse Screening.

(2) **Strategy for maintenance**

(a) Do not attempt to lower the dose if it is working

(b) Supplemental doses of break-through medication may be required for incidental pain, end-of dose pain, and pain that occurs with predictable situations. This can be determined by information that the patient provides from a pain diary or evaluation of additional need for supplemental medication.

(c) The standard increase in dose is 25 to 50% for mild pain and 50 to 100% for severe pain (Wisconsin)

(3) **Visit Frequency**

(a) There is no set visit frequency. This should be adjusted to the patient's need for evaluation of adverse effects, pain status, and appropriate use of medication, with recommended duration between visits from 1 to 6 months.

(Washington, 2002) (Colorado, 2002) (Ontario, 2000) (VA/DoD, 2003) (Maddox-AAPM/APS, 1997) (Wisconsin, 2004) (Warfield, 2004)

Opioids, pain treatment agreement

Recommended. A written consent or pain agreement for chronic use is not required but may make it easier for the physician and surgeon to document patient education, the treatment plan, and the informed consent. Patient, guardian, and caregiver attitudes about medicines may influence the patient's use of medications for relief from pain. This type of written document should be obtained prior to initiating opioid therapy. It should be discussed with the patient and family. This plan should be signed and dated and placed in the patient's chart, and include the following:

(1) Goals of therapy,
(2) Only one provider gives prescriptions,
(3) Only one pharmacy dispenses prescriptions,
(4) There will be a limit of number of medications, and dose of specific medications,
(5) Medications are not to be altered without the prescribing doctor's permission,
(6) Heavy machinery and automobile driving is not to occur until drug-induced sedation/drowsiness has cleared,
(7) Refills are limited, and will only occur at appointments,
(8) Treatment compliance must occur for all other modalities enlisted,
(9) Urine drug screens may be required,

(10) The patient must acknowledge that they are aware of potential adverse effects of the use of opioids including addiction,
(11) Information about opioid management can be shared with family members and other providers as necessary,
(12) If opioid use is not effective, the option of discontinuing this therapy may occur,
(13) The consequence of non-adherence to the treatment agreement is outlined.

(VA/DoD, 2003) (Heit, 2007) The recently released Utah opioid guidelines contain several valuable tools that can assist prescribing, including a Sample Treatment Plan for Prescribing Opioids. (Sundwall-Utah, 2009)

Opioids, patients at high-risk for misuse

See Opioids, dealing with misuse & addiction (plus aberrant behaviors & abuse).

Opioid provider outreach

Recommended. The CDC has urged states to ensure providers follow evidence-based treatment guidelines for the safe and effective use of prescription painkillers, and WLDI was asked by clients to create a document for distribution by payers and workers' compensation authorities to providers active in their system. The flyer aims to educate providers on appropriate use and dosage of opioids for acute, sub-acute and chronic pain, including recommendation of a two-week limit for acute pain, and a one month limit for chronic non-malignant pain patients. The free opioid flyer summarizing key evidence-based takeaways from ODG and the ODG Drug Formulary for education and outreach to healthcare providers, health plans and officials in state workers' comp systems, Medicare and Medicaid is available online. (ODG, 2013)

Opioids, psychological intervention

Recommended as an option to improve effectiveness of opioids for chronic pain. The following steps have been suggested to improve opioid treatment: (a) Provide ongoing education on both the benefits and limitations of opioid treatment. In particular, this should be based on the patient's experience with medication treatment and behavior regarding controlled substances in general. (b) Emphasize non-opioid care including self-management techniques. These may include relaxation, mindfulness meditation, acceptance, and distraction. (c) Emphasize realistic goals. (d) Avoid increasing dosages of medications to "chase pain." The result may ultimately be development of tolerance and/or hyperalgesia. (e) Encourage development of strategies for self-regulation of medication misuse. This may also include incorporation of a support group such as friends, family, an identified group (such as a 12-step group or group counseling), and/or individual counseling. (Naliboff, 2006)

Opioids, red flags for addiction

See Opioids, indicators for addiction.

Opioids, risk evaluation & mitigation strategy (REMS)

Recommended. The FDA announced a new Risk Evaluation and Mitigation Strategy (REMS) program and reports that it has already contacted the manufacturers of the extended-release and long-acting opioid medications hydromorphone, oxycodone, morphine, oxymorphine, morphone, methadone, and transdermal fentanyl, to require these manufacturers to develop and pay for programs to educate doctors on proper pain management, patient selection, and ensuring that their patients understand how to use these drugs safely. (FDA, 2011) On July 9, 2012, FDA approved a risk evaluation and mitigation strategy (REMS) for extended-release and long-acting opioid medications. (FDA, 2012) However, requiring drug companies to provide educational material to doctors on opioids, and making physician education under REMS voluntary are possible flaws in the plan. The propriety of having the pharmaceutical industry develop unbiased education for prescribers and patients is a concern. Another alternative would be to revise existing labeling to reflect the current clinical science and risk-benefit profile, and a black box warning might have more impact. In addition, a REMS for short-acting opioids has not been proposed despite data showing problems with these. (Nelson, 2012) Physicians are not conducting consistent risk reduction for patients taking long-term opioids, according to this large study, and race was associated with increased monitoring. These risk reduction strategies were tracked: Urine drug test (10.4% of black patients versus 4.1% of white); Regular office visits; & Restricted early refills. (Becker, 2011) Treating noncancer pain with opioids may not be worth the risk, according to a *BMJ* article. Physicians have become much more willing to prescribe opioids for chronic noncancer pain, and deaths involving opioid analgesics increased from 4,041 in 1999 to 14,459 in 2007. Deaths caused by oxycodone are especially high, and the majority is unintentional and occurs in relatively young individuals. The evidence for effectiveness is very thin, and many patients do not end up having significant relief from their pain, but the risk of addiction is much higher than initially thought. Studies in the 1990s suggested that the risk for addiction was less than 1%, but the actual risk of addiction for patients who are being treated for chronic pain for several months or longer is much higher, as much as 35%. (Dhalla, 2011)

Opioids, screening for dependence vs. addiction

See Opioids, differentiation: dependence & addiction.

Opioids, screening for risk of addiction (tests)

See Opioids, screening tests for risk of addiction & misuse.

Opioids, screening tests for risk of addiction & misuse

Recommend screening tests for the risk of misuse of prescription opioids and/or aberrant drug behavior (defined as behavior that suggests the presence of substance abuse or addiction), prior to initiating opioid therapy and with ongoing therapy (though frequency of testing is not well defined). It is important to attempt to identify individuals who have the potential to develop aberrant drug use both prior to the prescribing of opioids and while actively undergoing this treatment. Most screening occurs after the claimant is already on opioids on a chronic basis, and consists of screens for aberrant behavior/misuse. Types of questions asked include information about personal or family history of drug or alcohol abuse, previous aberrant drug-related

behavior, dysfunctional coping strategies, comorbid psychiatric conditions, cigarette smoking, age, and childhood sexual abuse. There is only limited evidence to determine the optimal methods for prediction and identification of aberrant drug-related behaviors. Results of screening tests should be used in the context of other sources in order to stratify risk and identify those individuals who are not good candidates for opioid therapy, or who require more careful monitoring with use. These include history and physical examination, clinical interview, discussions with family members, urine drug testing results, other monitoring findings (including prescription monitoring program reports and pill counts) and review of medical records. See Opioids, tools for risk stratification & monitoring. It is important to note that being at risk does not necessarily indicate that a patient will develop an addiction disorder, or is addicted. A history of an addiction disorder does not preclude a patient from being treated with opioids. (Savage 1999) (Portenoy, 1996) (Chou, 2009b) (Bohn, 2011) (Turk, 2008) (Moore, 2009) (Jones, 2012) (Jones, 2011) (Jamison, 2011) (Atluri, 2012) (Sehgal, 2012)

Studies comparing screening tools: There is minimal literature available to recommend any one tool over another, and a recent study which compared several screening instruments to a risk rating performed by a psychologist found the clinical assessment was the most sensitive predictor of discharge status, with the SOAPP-R being the most sensitive of the self-report measures. (Jones, 2012) Another recent study recommended the use of DIRE Score, ABC Checklist, Screening Tool by Atluri & Sudarshan, SOAPP, PDUQP, or PMQ. (Atluri, 2012)

Recommended screening instruments include the following. When available, scores as related to categories of low, moderate and high risk are included. See Opioids, tools for risk stratification & monitoring.

Subjective Screening Tools: The risk of use of a subjective tool is that abusers may not be truthful.

A. *The Screener and Opioid Assessment for Patients with Pain (SOAPP):* (Akbik, 2006) A brief self-report measure to capture important information in order to identify which chronic pain patients may be at risk for problems with long-term opioid medications. The cutoff score has been found with a positive answer of 8 or higher. Five factors were identified on factor analysis labeled
   (1) history of substance abuse;
   (2) legal problems;
   (3) craving medication;
   (4) heavy smoking; &
   (5) mood swings.

B. *Screener and Opioid Assessment for Patients with Pain- Revised (SOAPP-R):* (Butler, 2008) (Butler, 2009) A self-report instrument designed to predict aberrant medication-related behaviors among persons with chronic pain. This test contains more subtle items than the SOAPP and items that do not require admission of socially unacceptable behavior. Patients scoring 17 or less are considered low risk. Those who score over 17 are considered high risk.

C. *Pain Medication Questionnaire (PMQ):* (Holmes, 2006) (Dowling, 2007) A score of 24 or lower is considered low risk. A score of 30 or more is considered high risk.

D. *Prescription Drug Use Questionnaire patient version(PDUQP):* (Compton, 2008) This is a 20-minute interview in which the patient is asked about pain condition, opioid use patterns, social and family factors, family history of pain and substance abuse, and psychiatric history. A score of 11 or greater is considered high risk for substance use disorder.

E. *Opioid Risk Tool:* (Kahan, 2006) A brief self-report tool that addresses five factors designed to track behaviors characteristic of addiction related to prescription drug medications in chronic pain populations. These include the following:

(1) Family history of substance abuse;
(2) Personal history of substance abuse;
(3) Age (between 16 and 45 years);
(4) History of preadolescent sexual abuse in females; &
(5) Psychiatric history (ADD, OCD, bipolar, schizophrenia, and depression).

The tool is gender specific. A low risk score is considered 0-3. Moderate risk is considered 4 to 7. High risk is a score ≥ 8. The Opioid Risk Tool is available on the recently released Utah opioid guidelines. (Sundwall-Utah, 2009) Recent studies have indicated that when used as a risk assessment tool the ORT has poor predictive abilities when compared to other risk assessment methods. When given by a psychologist (vs. patient-completed) the test has a better prediction of aberrant drug-taking behavior. (Jones, 2011) (Jones, 2012)

F. *NIDA Screening Test:* The National Institute on Drug Abuse (NIDA) has a Drug Use Screening Tool to identify patient drug, alcohol, and smoking use. Screening uses a Quick question: “In the past year, how often have you used alcohol (4+/5+ drinks in a day, depending on gender), tobacco products, prescription drugs for nonmedical reasons, or illegal drugs?” Patients respond from never, rarely, monthly, and weekly, to daily or almost daily. (Smith, 2010) If patient responses to the Quick Screen indicate illicit drug or nonmedical use of prescription drugs, clinicians should complete the full NIDA-Modified Alcohol, Smoking, and Substance Involvement Screening Test (NM ASSIST), which consists of up to 8 questions, depending on the patient's responses. Responses are scored placing patients into 3 categories (low, moderate, and high risk). (NIDA, 2012)

G. *Current Opioid Misuse Measure (COMM):* (Meltzer, 2011) (Butler, 2007) A 17-item self-report that helps to track current aberrant medication-related behaviors during opioid treatment. It is recommended for use in patients who have been taking opioids for an extended period of time. The authors recommend using this scale in tandem with the SOAPP-R. The cut-off score for high risk is 9 or higher.

H. *The CAGE Questionnaire:* (Brown, 1995) An early widely-used screening tool. (1) Have you ever felt the need to cut down on your drinking or drug use? (2) Have people annoyed you by criticizing your drinking or drug use? (3) Have you ever felt bad or guilty about your

drinking or drug use? (4) Have you ever needed an eye opener the first thing in the morning to settle your nerves?

Screens containing objective measures:

A. *Addiction Behaviors Checklist (ABC):* (Wu, 2006) A 20-item instrument designed to track observable behaviors noted both during and between clinical visits. The screen is specifically designed to focus on longitudinal assessment of behaviors suggestive of addiction. A score of 3 or above is considered the indicator for more careful monitoring.

B. *Diagnosis, Intractability, Risk, Efficacy (DIRE):* (Belgrade, 2006) This is a clinician-rated scale that predicts patient compliance and analgesic efficacy of long-term opioid treatment. Risk is subdivided into categories of psychological, chemical health, reliability and social support. Patients with scores of 14 or less are considered having potential of abuse.

C. *Atluri Screening Tool:* (Atluri, 2004) A clinician-rated screening tool to detect questionable opioid use. Items are answered "yes" or "no" in regards to opioids, opioid overuse, other substance abuse, low functional status, potentially unclear pain etiology and exaggeration of pain level/severity. A score of 4 or over is considered high risk.

Opioids, specific drug list

Recommend specific dosage and cautions below. See also Opioids for overall classifications.

Hydrocodone/Acetaminophen (Anexsia®, Co-Gesic®, Hycet™; Lorcet®, Lortab®; Margesic-H®, Maxidone™; Norco®, Stagesic®, Vicodin®, Xodol®, Zydone®; generics available): Indicated for moderate to moderately severe pain. Note: there are no FDA-approved hydrocodone products for pain unless formulated as a combination. Side Effects: See opioid adverse effects. Analgesic dose: The usual dose of 5/500mg is 1 or 2 tablets PO every four to six hours as needed for pain (Max 8 tablets/day). For higher doses of hydrocodone (>5mg/tab) and acetaminophen (>500mg/tab) the recommended dose is usually 1 tablet every four to six hours as needed for pain. Hydrocodone has a recommended maximum dose of 60mg/24 hours. The dose is limited by the dosage of acetaminophen, which should not exceed 3g/24 hours.

Hydrocodone/Ibuprofen (Vicoprofen®; generic available): 7.5mg/200mg. Side Effects: See opioid adverse effects and NSAIDS. Note: Recommended for short term use only (generally less than 10 days). Analgesic dose: 1 tablet every 4-6 hours as needed for pain; maximum: 5 tablets/day (Product information, Abbott Laboratories).

Codeine (Tylenol with Codeine®; generic available): Codeine as a single active ingredient is classified by the DEA as a schedule II medication. Codeine in combination with acetaminophen is classified as schedule III. Side Effects: Common effects include CNS depression and hypotension. Drowsiness and constipation occur in > 10% of cases. Codeine should be used with caution in patients with a history of drug abuse. Tolerance, as well as psychological and physical dependence may occur. Abrupt discontinuation after prolonged use may result in withdrawal. (AHFS Drug Information, 2008) (Clinical Pharmacology, 2008) (Lexi-Comp, 2008). Analgesic

dose: codeine - 15mg to 60mg per dose (Max 360mg/24hr), and acetaminophen 300mg to 1000mg per dose (Max 3000mg/24hr). Doses may be given as needed up to every 4 hours. (Product information, Ortho-McNeil)

Oxycodone immediate release (OxyIR® capsule; Roxicodne® tablets; generic available), Oxycodone controlled release (OxyContin®): [Boxed Warning]: Oxycontin® Tablets are a controlled release formulation of oxycodone hydrochloride indicated for the management of moderate to severe pain when a continuous, around-the-clock analgesic is needed for an extended period of time. Oyxcontin tablets are NOT intended for use as a prn analgesic. Side Effects: See opioid adverse effects. Analgesic dose: (Immediate release tablets) 5mg every 6 hours as needed. Controlled release: In opioid naive patients the starting dose is 10mg every 12 hours. Doses should be tailored for each individual patient, factoring in medical condition, the patient's prior opioid exposure, and other analgesics the patient may be taking. See full prescribing information to calculate conversions from other opioids. Note: See manufacturer's special instructions for prescribing doses of over 80mg and 160mg. Dietary caution: patients taking 160mg tablets should be advised to avoid high fat meals due to an increase in peak plasma concentration. (Product information, Purdue Pharma) There is no evidence that has been found to support extended-release opioids vs. immediate release. (Argoff, 2009)

Oxycodone/acetaminophen (Percocet®; generic available): Side Effects: See opioid side effects and acetaminophen. Analgesic dose: Dosage based on oxycodone content and should be administered every 4 to 6 hours as needed for pain. Initially 2.5 to 5 mg PO every 4 to 6 hours prn. Note: Maximum daily dose is based on acetaminophen content (Maximum 3000mg/day). For more severe pain the dose (based on oxycodone) is 10-30mg every 4 to 6 hours prn pain. Dose should be reduced in patients with severe liver disease.

Oxycodone/ibuprofen *(Combunox®; generic available): Side Effects:* See opioid adverse effects and NSAIDS. Note: Recommended for short term use only (generally less than 7 days). 1 tablet (ibuprofen 400mg; oxycodone 5mg) every 6 hours as needed. Do not exceed 4 tablets/24 hours. Duration of therapy should not exceed 7 days. The elderly may be more sensitive to the usual adult dosage. (Clinical Pharmacology, 2008)

Levorphanol (Levo-Dromoran®; generic available): 2mg tablets. Used for moderate to severe pain, when an opioid is appropriate for therapy. Levophornal has been shown to be effective for neuropathic pain. (Prommer 2007) Levorphanol is 4 to 8 times as potent as morphine and it has a much longer half-life. Side Effects: See opioid adverse effects. Analgesic dose: The usual starting dose is 2mg PO, which may be repeated in 6 to 8 hours. Note: Assess patient for signs of hypoventilation and excessive sedation before continuing subsequent doses. Patients who tolerate dosing and need further pain management may take 3mg PO every 6 to 8 hours. Note: Levorphanol is not recommended for breakthrough pain. (Prommer 2007)

Oxymorphone (Opana®), Oxymorphone Extended Release (Opana ER®), available generic available: [Boxed Warnings]: Opana ER® is not intended for prn use. Patients are to avoid alcohol while on Opana ER® due to increased (possibly fatal) plasma levels. Side Effects: See

opioid adverse effects. Immediate release and extended release tablets should be taken 1 hour before or 2 hours after eating. Analgesic dose: (Immediate release) in opioid-naive patients the starting dose is 10-20mg PO every 4 to 6 hours as needed. Patients may be started at doses of 5mg if appropriate (e.g., renal impairment). Refer to full prescribing information for calculating conversions from other opioids. Note: It is not recommended to begin therapy at doses higher than 20mg due to adverse effects. (Extended release tablets) Opioid-naive patients should initially begin on 5mg every 12 hours around the clock. It is recommended that doses be individually titrated in increments of 5 to 10mg every 12 hours for 3 to 7 days. (Product information, Ethex Pharmaceuticals)

Hydromorphone (Dilaudid®; generic available): 2mg, 4mg, 8mg. Side Effects: Respiratory depression and apnea are of major concern. Patients may experience some circulatory depression, respiratory arrest, shock and cardiac arrest. The more common side effects are dizziness, sedation, nausea, vomiting, sweating, dry mouth and itching. (Product Information, Abbott Labs 2006) Analgesic dose: Usual starting dose is 2mg to 4mg PO every 4 to 6 hours. A gradual increase may be required, if tolerance develops. Exalgo (extended release hydromorphone) has been approved by the FDA, but there are no published studies demonstrating superiority. (FDA, 2010)

Methadone (Dolophine®, Methadose® oral dosage forms, generic available): Side Effects: See methadone adverse effects. Analgesic dose: For moderate to severe pain the initial oral dose (opioid naive) is 2.5mg to 10mg every 8 to 12 hours. However, a smaller dosing interval (every 4 to 12 hours) may be needed to produce adequate pain relief.

Morphine sulfate, Morphine sulfate ER, CR (Avinza®; Kadian®; MS Contin®; Oramorph SR®; generic available, except extended release capsules): Side Effects: See opioid adverse effects. Analgesic dose: Immediate release tablets for acute pain (moderate to severe); Opiate naive patients should begin with 10mg PO every 4 hours as needed. Opioid tolerant patients may need higher starting doses to achieve pain relief (10-30mg every 4 hours as needed). See specific product for full prescribing information. Controlled, extended and sustained release preparations should be reserved for patients with chronic pain, who are in need of continuous treatment. Avinza® - morphine sulfate extended release for once daily dosing. The 60mg, 90mg and 120mg capsules are for opioid tolerant patients only. Kadian® - (extended release capsules) May be dosed once or twice daily. The 100mg and 200mg capsules are intended for opioid tolerant patients only. MS Contin® - (controlled release tablets) Doses should be individually tailored for each patient.

Fentanyl transdermal (Duragesic®; generic available): Indicated for management of persistent chronic pain, which is moderate to severe requiring continuous, around-the-clock opioid therapy. The pain cannot be managed by other means (e.g., NSAIDS). Note: Duragesic® should only be used in patients who are currently on opioid therapy for which tolerance has developed. The patches should be applied to INTACT skin only. Side Effects: See opioid adverse effects. Analgesic dose: The previous opioid therapy for which tolerance has occurred should be at least

equivalent to fentanyl 25mcg/h. Patches are worn for a 72 hour period. (Product information, Purdue Pharma)

Tramadol (Ultram®; Ultram ER®; generic available): Tramadol is a synthetic opioid affecting the central nervous system. Tramadol is not classified as a controlled substance by the DEA, but it is designated schedule IV drug in 13 states. Side Effects: Dizziness, nausea, constipation, headache, somnolence, flushing, pruritus, vomiting, insomnia, dry mouth, and diarrhea. Tramadol may increase the risk of seizure especially in patients taking SSRIs, TCAs and other opioids. Do not prescribe to patients at risk for suicide or addiction. Warning: Tramadol may produce life-threatening serotonin syndrome, in particular when used concomitantly with SSRIs, SNRIs, TCAs, and MAOIs, and triptans or other drugs that may impair serotonin metabolism. Analgesic dose: Tramadol is indicated for moderate to severe pain. The immediate release formulation is recommended at a dose of 50 to 100mg PO every 4 to 6 hours (not to exceed 400mg/day). This dose is recommended after titrating patients up from 100mg/day, with dosing being increased every 3 days as tolerated. For patients in need of immediate pain relief, which outweighs the risk of non-tolerability the initial starting dose, may be 50mg to 100mg every 4 to 6 hours (max 400mg/day). Ultram ER®: Patient currently not on immediate release tramadol should be started at a dose of 100mg once daily. The dose should be titrated upwards by 100mg increments if needed (Max dose 300mg/day). Patients currently on immediate release tramdadol, calculate the 24-hour dose of IR and initiate a total daily dose of ER rounded to the next lowest 100mg increment (Max dose 300mg/day). (Product information, Ortho-McNeil 2003) (Lexi-Comp, 2008) Ultram ER is a viable opioid of first choice for patients suffering from osteoarthritis, low back pain, and neuropathic pain, offering more consistent and improved nighttime pain control, less need to awaken at night to take another dose of pain medication, and less clock-watching by patients in chronic noncancer pain. (Nicholson, 2009)

Tramadol/Acetaminophen (Ultracet®; generic available): 37.5mg/325mg. Side Effects: See tramadol and acetaminophen. Analgesic dose: For short term use ≤ 5 days in acute pain management. 2 tablets PO every 4 to 6 hours as needed (max 8 tablets/day). Not recommended in patients with hepatic impairment. (Product information, Ortho-McNeil 2004)

Propoxyphene [Off market in U.S.] hydrochloride (Darvon®; generic available), Propoxyphene napsylate (Darvon-N®), Propoxyphene/Apap (Darvocet-N; generic available): Side Effects: See propoxyphene and acetaminophen. As of 2010, propoxyphene is being withdrawn from US market. Analgesic dose: Propoxyphene Hcl is available in 65 mg capsule and the dose is 65mg every 3 to 4 hours as needed. Maximum daily dose is 390mg. Propoxyphene napsylate is available in 100mg tablets which are to be given 100mg every 4 hours as needed (Maximum daily dose is 600mg). Propoxyphene-N/Apap is available as 50mg/650mg and 100mg/650mg. 50mg/650mg: 1 or 2 tablets PO every 4 hours as needed for pain. 100mg/650mg: 1 PO every 4 to 6 hours as needed for pain. Max daily doses should not exceed that of propoxyphene (600mg) and acetaminophen (3000mg). (Clinical Pharmacology, 2008) Note: On 1/30/09 an FDA advisory panel narrowly voted to recommend that propoxyphene should be pulled from the

market. The committee stated that the evidence of efficacy for propoxyphene was marginally better than placebo and never greater than acetaminophen. The agency had collected reports of more than 1,400 deaths in people who had taken the drug since 1957, though experts stressed the figure does not prove the drug was the cause of death in all cases, but they concluded that the drug showed little benefit and lots of risk. (FDA, 2009)

Opioids, state medical boards guidelines

The Federation of State Medical Boards Model Guidelines for the Use of Controlled Substances for the Treatment of Pain say State medical boards recognize under treatment of pain as a public health priority. Under prescribing pain medications is considered as much a breach of the appropriate standard of care as overprescribing. (Federation, 2004) See also individual state guidelines, for example the California Medical Board Guidelines for Prescribing Controlled Substances for Pain. (California, 1994)

Opioids, steps to avoid misuse/ addiction

See Opioids, dealing with misuse & addiction (plus aberrant behaviors & abuse).

Opioids, tools for risk stratification & monitoring

Recommend that results of screening tests should be used in context of other sources in order to stratify risk and identify those individuals who are not good candidates for opioids, or who require more careful monitoring with use. Results of these screening tools when interpreted correctly and incorporated in an overall Risk Evaluation and Management Strategy (REMS) can help design a plan for a trial of opioids for patients with chronic pain that will help to minimize the risk of misuse, abuse and addiction. (Sehgal, 2012) (Manchikanti, 2012) (Atluri, 2012) (Chou, 2009) (Gourlay, 2009) (Savage, 2009) (Manubay, 2011) (Kirsh, 2011) The categories below are consensus based and the recommendation is to include these baseline suggestions in conjunction with a history and physical examination, urine drug testing, pill counts, prescription drug monitoring reports, discussions with family members and review of medical records (including from previous treating physicians) in order to obtain an accurate assessment of risk of addiction and/or aberrant behavior.

High Risk: Clinical findings: Minimal objective findings are documented to explain pain. Symptom magnification can be noted. Hyperalgesia may be present. Underlying pathology can include diseases associated with substance abuse including HIV, hepatitis B and C, and pathology associated with alcoholism or drug abuse. Patients with suicidal risks or poorly controlled depression may be at higher risk for intentional overdose when prescribed opioids for chronic pain. (Cheatle, 2011) Screening tests and/or variables included in these: Results of administered screening tests fall into a range considered “high” or there is evidence of elevated risks for substance abuse including personal and/or family history, comorbid psychiatric disease, and/or childhood trauma. Many authors only include individuals with active substance abuse in the “high risk” category and include individuals with treated/non-active disease in the moderate category. See Opioids, screening tests for risk of addiction & misuse. Indicators for addiction

and misuse: These are present including evidence of adverse consequences, impaired control over medication use, craving and preoccupation, and adverse behavior. See Opioids, indicators for addiction & misuse.

Moderate Risk: The patient generally has objective and subjective signs and symptoms of an identifiable diagnostic problem but may have some but not all of the identifiers found under the "high risk" category. Some authors indicate that individuals with treated or non-active substance abuse issues or significant family history of this, fall into this category. These patients may have psychiatric comorbidity. (Gourlay, 2009)

Low Risk: Clinical findings; Pathology is identifiable with objective and subjective symptoms to support a diagnosis. There is an absence of psychiatric comorbidity. (Note: ODG advises that extreme caution is required for any opioid use in patients with underlying psychiatric disease. See Opioids for chronic pain.) Screening tests and/or variables included in these: Absent. Indicators for addiction and misuse: Absent.

Opioids, weaning of medications

See Weaning of medications.

Opioid hyperalgesia

Recommend screening and treatment as indicated below.

Definition: Patients who receive opiate therapy sometimes develop unexpected changes in their response to opioids. This may include the development of abnormal pain (hyperalgesia), a change in pain pattern, or persistence in pain at higher levels than expected. These types of changes occur in spite of continued incremental dose increases of medication. Opioids in this case actually increase rather than decrease sensitivity to noxious stimuli. It is important therefore to note that a decrease in opioid efficacy should not always be treated by increasing the dose, but may actually require weaning. (Chang, 2007)

Diagnosis: How to diagnose:

(1) Attempt to determine if pain has increased over that, which was pre-existing (in the absence of apparent disease progression).
(2) Attempt to determine if the patient has previously responded to opioids but now has worsening pain.
(3) Attempt to determine if the patient has never had improved pain with opioids.
(4) If disease progression is ruled out, determine if there is evidence of possible opioid tolerance or opioid hyperalgesia.
(5) Evaluate pain: In cases of opioid hyperalgesia pain may spread and become more diffuse and less well-defined in quality, beyond what would be expected from the preexisting pain state. This is generally not an acute but is an insidious process.
(6) Psychological issues such as secondary gain, exacerbation of underlying depression or anxiety, and the development of addictive disease should also be ruled out.

Treatment: Suggested treatment for patients with increasing pain (assumes that the patient has had improvement with opioids at some point):

(1) It is not unreasonable to give a trial of opioid dose escalation to see if pain and function improves. If pain improves, the diagnosis is probable tolerance. If pain does not improve or worsens, this may be evidence of opioid hyperalgesia and the opioid dose should be reduced or weaned.
(2) Another option to consider is opioid rotation.
(3) Use of adjuvant pain medications is recommended when there is evidence of either tolerance or hyperalgesia.
(4) When there is no evidence of pain improvement after opioid dosage is increased, further evaluation by a specialist with additional expertise in psychiatry, pain medicine, or addiction medicine should be considered.

Recent research: Clinicians should suspect opioid-induced hyperalgesia (OIH) when opioid treatment effect seems to wane in the absence of disease progression, particularly in the context of unexplained pain reports or diffuse allodynia unassociated with the original pain, and increased levels of pain with increasing dosages. The treatment involves reducing the opioid dosage, tapering them off, or supplementation with NMDA receptor modulators. (Lee, 2011) Office-based detoxification, reduction of opioid dose, opioid rotation, and the use of specific NMDA receptor antagonists are all viable treatment options for OIH. The role of sublingual buprenorphine appears to be an attractive, simple option for the treatment of OIH. (Silverman, 2009)

Opioid pumps

See Implantable drug-delivery systems (IDDSs).

Implantable drug-delivery systems (IDDSs)

Recommended only as an end-stage treatment alternative for selected patients for specific conditions indicated below, after failure of at least 6 months of less invasive methods, and following a successful temporary trial. Results of studies of opioids for musculoskeletal conditions (as opposed to cancer pain) generally recommend short use of opioids for severe cases, not to exceed 2 weeks, and do not support chronic use (for which a pump would be used), although IDDSs may be appropriate in selected cases of chronic, severe low back pain or failed back syndrome. This treatment should only be used relatively late in the treatment continuum, when there is little hope for effective management of chronic intractable pain from other therapies. (Angel, 1998) (Kumar, 2002) (Hassenbusch, 2004) (Boswell, 2005) (Deer, 2009) (Patel, 2009) For most patients, it should be used as part of a program to facilitate restoration of function and return to activity, and not just for pain reduction. The specific criteria in these cases include the failure of at least 6 months of other conservative treatment modalities, intractable pain secondary to a disease state with objective documentation of pathology, further surgical or other intervention is not indicated, there are no contraindications to a trial, psychological

evaluation unequivocally states that the individual has realistic expectations and the pain is not psychological in origin, and a temporary trial has been successful prior to permanent implantation as defined by a 50% reduction in pain. (Tutak, 1996) (Yoshida, 1996) (BlueCross, 2005) (United Health Care, 2005) See also Opioids and the Low Back Chapter. In a study of IDDS in 136 patients with low back pain, after one year 87% of the patients described their quality of life as fair to excellent, and 87% said they would repeat the implant procedure. However, complication rates (i.e., infection, dislodging, and cerebrospinal fluid leak) are likely to rise with time in these procedures and more longitudinal outcome studies need to be conducted. (Deer, 2004) In one survey involving 429 patients with nonmalignant pain treated with intrathecal therapy, physician reports of global pain relief scores were excellent in 52.4% of patients, good in 42.9%, and poor in 4.8%. In another study of 120 patients, the mean pain intensity score had fallen from 93.6 to 30.5 six months after initiation of therapy. In both studies, patients reported significant improvement in activities of daily living, quality of life measures, and satisfaction with the therapy. (Winkelmuller, 1996) (Paice, 1997) One study in patients suffering from chronic low back pain caused by failed back syndrome found a 27% improvement after 5 years for patients in the intrathecal drug therapy group, compared with a 12% improvement in the control group. (Kumar, 2002) Supporting empirical evidence is significantly supplemented and enhanced when combined with the individually based observational evidence gained through an individual trial prior to implant. This individually based observational evidence should be used to demonstrate effectiveness and to determine appropriate subsequent treatment. Generally, use of implantable pumps is FDA approved and indicated for chronic intractable pain. Treatment conditions may include FBSS, CRPS, Arachnoiditis, Diffuse Cancer Pain, Osteoporosis, and Axial Somatic Pain. As we have gained more experience with this therapy, it has become apparent that even intrathecal opiates, when administered in the long term, can be associated with problems such as tolerance, hyperalgesia, and other side effects. Consequently, long-term efficacy has not been convincingly proven. However, it is important to note that there is a distinction between "tolerance" and "addiction", and the levels of drugs administered intrathecally should be significantly below what might be needed orally in their absence. (Osenbach, 2001) (BlueCross BlueShield, 2005) See also Intrathecal drug delivery systems, medications

Safety Precautions & Warnings: Oral opioid prescribing, use and how to best keep patients as safe as possible have all have been the subject of increasing discussion, in part, due to related accidental deaths. (Phillips, 2008) Use of intrathecal opioids, as for all routes of administration, is not without risk. Constipation, urinary retention, nausea, vomiting, and pruritus are typical early adverse effects of intrathecal morphine and are readily managed symptomatically. Other potential adverse effects include amenorrhea, loss of libido, edema, respiratory depression, accidental death and technical issues with the intrathecal system. (Winkelmuller, 1996) (Paice, 1997) Common causes of mortality in implanted pump patients appear to be preventable through adherence to dosing and monitoring information for drugs approved for chronic intrathecal administration. Follow product instructions and dosing recommendations. Failure to comply with

all implanted infusion pump product instructions can lead to technical errors or improper use and result in additional surgical procedures, a return of underlying symptoms, or a clinically significant drug underdose or fatal drug overdose. (Medtronic, 2009) The mortality rate in the implanted pump population is higher than some operative benchmarks and similar at approximately 30 days and 1-year post discharge to open spine surgery in the Medicare population. (Coffey, 2009) Monitor patients in an adequately equipped facility for a sufficient time to monitor drug effects. When using concomitant medications with respiratory or CNS depressant effects, provide appropriate supervision and monitoring. (Medtronic, 2009)

Refills: IDDSs dispense drugs according to instructions programmed by the clinician to deliver a specific amount of drug per day or to deliver varying regimens based on flexible programming options, and the pump may need to be refilled at regular intervals. The time between refills will vary based on pump reservoir size, drug concentration, dose, and flow rate. A programming session, which may occur along with or independent of a refill session, allows the clinician to adjust the patient's prescription as well as record or recall important information about the prescription. (Hassenbusch, 2004) According to the FDA, the manufacturer's manuals should be consulted for specific instructions and precautions for initial filling, refilling and programming. (FDA, 2010) For most pumps, the maximum dose that can be delivered between refills is 1000mg. If refills are usually administered after 16 to 17 mL have been infused, and most pumps are 18-20mL, the minimum time between each visit is 42 days if the daily dose rate is 20 mg/day. Given that a refill visit presents a good opportunity for monitoring, this panel suggested that the concentration be adjusted to allow refill visits a minimum of every 4 to 6 weeks, and maximum of every 2–3 months. (Bennett, 2000)

Patient selection (in addition to criteria below): This textbook recommends that, after other criteria are met, patients with neuropathic pain are better candidates for spinal cord stimulation (SCS), and patients with nociceptive pain are better candidates for intrathecal drug delivery (IDD). It also recommends psychological evaluation and clearance before any implantation, plus positive response to a trial. (Cole, 2003)

Indications for Implantable drug-delivery systems:

Implantable infusion pumps are considered medically necessary when used to deliver drugs for the treatment of:

- Primary liver cancer (intrahepatic artery injection of chemotherapeutic agents);
- Metastatic colorectal cancer where metastases are limited to the liver (intrahepatic artery injection of chemotherapeutic agents);
- Head/neck cancers (intra-arterial injection of chemotherapeutic agents);
- Severe, refractory spasticity of cerebral or spinal cord origin in patients who are unresponsive to or cannot tolerate oral baclofen (Lioresal®) therapy (intrathecal injection of baclofen)

Permanently implanted intrathecal (intraspinal) infusion pumps for the administration of opiates or non-opiate analgesics, in the treatment of chronic intractable pain, are considered medically necessary when:

· Used for the treatment of malignant (cancerous) pain and all of the following criteria are met:

1. Strong opioids or other analgesics in adequate doses, with fixed schedule (not PRN) dosing, have failed to relieve pain or intolerable side effects to systemic opioids or other analgesics have developed; and
2. Life expectancy is greater than 3 months (less invasive techniques such as external infusion pumps provide comparable pain relief in the short term and are consistent with standard of care); and
3. Tumor encroachment on the thecal sac has been ruled out by appropriate testing; and
4. No contraindications to implantation exist such as sepsis or coagulopathy; and
5. A temporary trial of spinal (epidural or intrathecal) opiates has been successful prior to permanent implantation as defined by a 50% reduction in pain. A *temporary* trial of intrathecal (intraspinal) infusion pumps is considered medically necessary only when criteria 1-4 above are met.

· Used for the treatment of non-malignant (non-cancerous) pain with a duration of greater than 6 months and all of the following criteria are met:

Documentation, in the medical record, of the failure of 6 months of other conservative treatment modalities (pharmacologic, injection, surgical, psychologic or physical), if appropriate and not contraindicated; and

1. Intractable pain secondary to a disease state with objective documentation of pathology in the medical record (per symptoms, exam and diagnostic testing); and
2. Further surgical intervention or other treatment is not indicated or likely to be effective; and
3. Psychological evaluation has been obtained and evaluation states that the pain is not primarily psychologic in origin, the patient has realistic expectations and that benefit would occur with implantation despite any psychiatric comorbidity; and
4. No contraindications to implantation exist such as sepsis, spinal infection, anticoagulation or coagulopathy; and
5. A temporary trial of spinal (epidural or intrathecal) opiates has been successful prior to permanent implantation as defined by at least a 50% to 70% reduction in pain and documentation in the medical record of functional improvement and associated reduction in oral pain medication use. A temporary trial of intrathecal (intraspinal) infusion pumps is considered medically necessary only when criteria 1-5 above are met.

For average hospital LOS if criteria are met, see Hospital length of stay (LOS).

Dr. NT, a board certified orthopedic surgeon, testified on behalf of the Respondent/Carrier and noted that the drug dilauid is injected directly into the thecal sac and a trial is granted prior to a pump being installed. Dr. T noted that Claimant had chronic pain from failed surgical

interventions. In addition, Dr. T was in agreement with the IRO noting that Claimant had not shown that he was entitled to a reversal of the IRO decision because he had not shown through documentation in the medical records, of the failure of 6 months of other conservative treatment modalities [pharmacologic, injection, surgical psychologic or physical], if appropriate and not contraindicated; and a temporary trial of spinal [epidural or intrathecal] opiates had been successful prior to permanent implantation as defined by at least 50% to 70% reduction in pain and documentation in the medical record of functional improvement and associated reduction in oral pain medication use.

Dr. AT, board certified in pain medicine, testified on behalf of the Petitioner/Claimant. Dr. T stated that Claimant had failed all conservative treatments modalities and noted that the intrathecal dilaudid trial was a generally accepted standard treatment for Petitioner/Claimant's condition. Dr. T did note when questioned that he only went on Petitioner/Claimant's statements regarding having previously been treated with a spinal cord stimulator. Dr. T also indicated that Claimant had used the long acting medications which were noted by Dr. T to have been the lowest dosage possible and not the appropriate dose or schedule as required by the ODG.

The URA reviewer, a Texas state-licensed specialist in anthesthesiology and pain management reviewed the case and upheld the denial of the intrathecal dilaudid trial. The basis of the denial was that Claimant had not exhausted all lower levels of treatments. It was noted that Claimant had underwent a spinal stimulator trial but there was not documentation of the results. In addition, there was a recommendation that a trial of long-acting narcotics with documentation of failure after a period of time, and documentation on the result of the spinal column stimulator trial.

Medical documentation and testimony were insufficient to establish that the medical treatment requested was medically necessary. Therefore, the Petitioner has failed to meet his burden that the decision of the IRO should be reversed that Claimant is not entitled to intrathecal dilaudid trial.

Even though all the evidence presented was not discussed, it was considered. The Findings of Fact and Conclusions of Law are based on all of the evidence presented.

FINDINGS OF FACT

1. The parties stipulated to the following facts:

   A. Venue is proper in the (City) Field Office of the Texas Department of Insurance, Division of Workers' Compensation.

   B. On (Date of Injury), Claimant was the employee of (Employer), Employer.

   C. Claimant sustained a compensable injury on (Date of Injury).

2. Carrier delivered to Claimant and Provider a single document stating the true corporate name of Carrier, and the name and street address of Carrier's registered agent, which document was admitted into evidence as Hearing Officer's Exhibit Number 2.

3. The IRO determined that an intrathecal dilaudid trial was not health care reasonably required for treatment of the compensable injury of (Date of Injury).

4. An intrathecal dilaudid trial is not health care reasonably required for the compensable injury of (Date of Injury).

CONCLUSIONS OF LAW

1. The Texas Department of Insurance, Division of Workers' Compensation, has jurisdiction to hear this case.

2. Venue is proper in the (City) Field Office.

3. The preponderance of the evidence is not contrary to the decision of the IRO that an intrathecal dilaudid trial is not health care reasonably required for the compensable injury of (Date of Injury).

DECISION

Claimant is not entitled to an intrathecal dilaudid trial for the compensable injury of (Date of Injury).

ORDER

Carrier is not liable for the benefits at issue in this hearing. Claimant remains entitled to medical benefits for the compensable injury in accordance with §408.021.

The true corporate name of the insurance carrier is **TEXAS MUTUAL INSURANCE COMPANY** and the name and address of its registered agent for service of process is:

RICHARD J. GERGASKO
6210 EAST HIGHWAY 290
AUSTIN, TEXAS 78723

Signed this 24th day of February, 2014.

Jacqueline Harrison
Hearing Officer