DIVISION OF WORKERS' COMPENSATION GUIDELINE FOR THE USE OF OPIOIDS TO TREAT WORK-RELATED INJURIES

FORUM POSTING APRIL 2014

PART B: RECOMMENDATIONS

Table of Contents

B. RECOMMENDATIONS

Part B of the DWC Guidelines provides complete recommendations for management of patients with acute, subacute, post-operative, and chronic pain, as well as appendices with helpful tools for clinicians. The recommendations in Part B are based on findings from a review of existing guidelines and the literature (found in Part C). References cited in Part B are listed in the Reference section of Part C.

1. OPIOIDS FOR ACUTE PAIN (UP TO FOUR WEEKS AFTER INJURY OR PAIN ONSET)

The term “acute pain” is defined in this guideline as pain lasting up to four weeks from the initial onset of injury.

1.1. Mild Acute Injuries (musculoskeletal strains and sprains, muscle pain, tendonitis)

- Opioid medications should not in general be used for mild injuries such as acute onset strains, sprains, muscle pain, and tendonitis, myofascial pain; they are also not indicated for repetitive strain injuries. The following therapies should be utilized first for acute injuries:

    1. Pharmacologic therapy with non-opioid pain medications (e.g., acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs), unless contraindicated due to history of allergy or severe adverse impact.
    2. Physical activity, including rest, passive and active range of motion, and physical therapy with graded exercise matched to the injury.
    3. Complementary/alternative modalities, such as acupuncture.

- Opioid medications should only be used for treatment of acute pain when the severity of the pain warrants that choice *and* after determining that other non-opioid pain medications or other therapies will not provide adequate pain relief or are contraindicated for medical reasons. They should only be prescribed at the lowest dose that provides pain relief, for a limited time (e.g., five days) and with no refill, prior to re-assessment. (Cifuentes 12)

- If opioids are prescribed, the Controlled Substance Utilization Review and Evaluation System (CURES), California's Prescription Drug Monitoring Program (PDMP) should be accessed. If CURES indicates the simultaneous use of other narcotic medication, opioid use is contraindicated at this point.

- Weaker opioids and the lowest effective dose should be used.[i] Stronger opioids may be considered only if weaker ones are ineffective or not tolerated. The FDA categorizes drugs into five schedules (from I to V). (US FDA CFR Title 21, Chapter 13) Schedule V drugs (weakest) have the lowest potential for abuse and Schedule I drugs (strongest) are considered to have the highest potential for abuse. (US FDA CFR Title 21, Chapter II, Part 1308)

- Patients should be cautioned about the potential adverse effects of opioid medications, including impacts on alertness. Driving and operation of heavy equipment should be discouraged while on these medications. (See Appendix B, Sample of a Written Opioid Treatment Agreement)

- At the time of initial prescription, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:

Based on the literature summarized above, there is insufficient evidence that supports the efficacy of opioids in the acute phase for mild injuries. There is quality evidence that use of opioids can lead to adverse outcomes.

1.2. Moderate to Severe Acute Soft-Tissue Injuries (e.g., severely strained ligaments, severe sprains, moderate trauma, moderate to severe low back pain, moderate to severe radiculopathy)

A brief course of short acting opioids is an option to provide analgesia for moderate to acute severe pain due to acute soft tissue injuries when pain is uncontrolled by other measures and/or accompanied by functional deficits.

- The clinician should ensure that the following conditions are met prior to prescribing opioids for moderate to severe soft tissue injuries:

1. Documented moderate to severe soft tissue injury
2. The following additional treatments, which may be both medically indicated and more effective than opioids, have been initiated and either (a) have failed and/or (b) are contraindicated and/or (c) there are reasonable expectations that only opioids will produce immediate pain relief and sleep immediately following the injury:
    - Pharmacologic therapy with non-opioid pain medications (e.g., acetaminophen, NSAIDs).
    - Physical activity, including rest, passive and active range of motion, and physical therapy with graded exercise matched to the injury.
    - Complementary/alternative modalities, such as acupuncture.
3. The CURES database has been checked and the results documented prior to prescribing opioids. If the search indicates the use of other opioids medication and the assessment otherwise supports the use of opioids, only a limited supply should be prescribed at the lowest feasible dose under careful monitored conditions. (See Section 3.3.4, Use of CURES to Ensure Safe and Effective Opioid Use)
4. Documentation is provided in the medical record that the following conditions are <u>not</u> present. These conditions are a relative contraindication to initiating opioids:

Depression, anxiety, personality disorder, untreated sleep disorders, current or past substance abuse, drug seeking behavior, other psychotropic medications, post-traumatic stress disorder (PTSD), cognitive impairment, chronic obstructive pulmonary disease (COPD), severe obesity, balance problems/fall risk, osteoporosis, and renal failure.

- If these conditions are present, written documentation must be provided to justify the use of opioids.

5. The use of sedative-hypnotics, including anti-histamines (H_1-blockers) and benzodiazepines, has been discontinued before prescribing opioids. (Fulton-Kehoe 2013) (See Section 7,Concurrent Use of Benzodiazepines and Other Sedative Hypnotics)
6. There is no use of illicit substances or other substances that should not be taken concomitantly (e.g., sedating substances, including alcohol and benzodiazepines). (Fulton-Kehoe 2013) Treatment with opioids is contraindicated in individuals using illicit substances. (See Section 7, Concurrent Use of Benzodiazepines and Other Sedative Hypnotics)

- Clinical practice should include the following:

1. Initiate opioids as a “trial” to ascertain whether the selected opioid produces functional improvement.
2. Document clinically meaningful improvement in pain and function (See Section 3.3.7, Monitoring Effectiveness of Chronic Opioid Treatment: Tracking Pain and Function and Determining Clinically Meaningful Improvement)
3. Generally, prescribe opioids at night or when the patient is not at work. (Gomes 13)
4. Weaker opioids and the lowest effective dose should be used. Stronger opioids may be considered only if weaker ones are ineffective or not tolerated. The FDA categorizes drugs into five Schedules (from I to V). (US FDA CFR Title 21, Chapter 13) Schedule V drugs (weakest) have the lowest potential for abuse and Schedule I

drugs (strongest) are considered to have the highest potential for abuse. (US FDA CFR Title 21, Chapter II, Part 1308)

5. Prescribe only one opioid at a time. The lowest dose capable of providing analgesia should be used. (Cifuentes 2010; Dersh 2008; Volinn 2009)

    - Doses for opioid-naïve patients should not exceed 80 mg/day morphine equivalent dosage (MED) (See Section 3.3.8, Opioid Titration and Dosing).

    - Prescribe a short course (limited supply, for example 1-2 weeks with no refills) of opioid medication. (Cifuentes 2012)

6. Providers may consider using screening tools or recommend consultation with a pain specialist at any point prior to the 4th week, if they feel it is warranted. (See Appendix A, Brief, Validated Tools; Section 3.3.1, Screening for Risk of Addiction to Opioids or Adverse Events Prior to Initiation of Chronic Opioid Treatment, Section 3.3.6; and Section 6, Pain Medicine Consultation)

7. Clinicians should monitor for and document indications for discontinuing opioids, including:

    - Resolution of pain or improvement to the point of not requiring opioids within the expected timeframe for the injury being treated.

    - Lack of improved function despite adherence to the treatment regimen.

    - Intolerance or severe adverse effects: it is likely that at least some side effects will occur with opioid use. The nature and severity of side effects will determine whether to discontinue the medication.

    - Non-compliance, surreptitious medication use, aberrant drug screening results, diversion, consumption of medications or substances when advised to not take simultaneously.

8. Patients who have been treated for more than two weeks with opioids should have these medications discontinued via tapering rather than by abrupt cessation.
9. Patients should be cautioned about the potential adverse effects of opioid medications, including impacts on alertness. Driving and operation of heavy equipment should be discouraged while on these medications. (See Appendix B, Written Opioid Treatment Agreement)
10. At the time of initial prescription, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:

The physiologic benefits of effective analgesia are well described in these circumstances. The goal is to reduce pain in the first few days following injury. Thereafter, functional restoration is a specific goal for opioid use in this setting. The short and long-term risks of opioid use outweigh the benefits if there is lack of efficacy, evidence of adverse effect, or inappropriate medication or substance use.

1.3. Severe Acute Injuries (fractures, crush injuries, major trauma, large burns, other injuries with significant tissue damage) (See also Section 10: Opioid Use in Catastrophic Injuries)

Opioids are recommended for the treatment of acute, severe pain uncontrolled by other modalities and/or with functional deficits. A brief course may also be indicated for pain following severe injuries. (Blondell 2013)

- The physician should ensure that the following conditions are met prior to prescribing opioids for severe acute injuries:
    1. Documented severe injury
    2. The following additional treatments, which may be more effective than opioids, have been initiated and either (a) have failed and/or (b) are contraindicated and/or (c)

there are reasonable expectations that only opioids will produce immediate pain relief and sleep immediately following the injury:

- Pharmacologic therapy with non-opioid pain medications (e.g., acetaminophen, NSAIDs).
- Physical activity, including rest, passive and active range of motion, and physical therapy with graded exercise matched to the injury.
- Complementary/alternative modalities, such as acupuncture.

3. The CURES database is checked and the results documented prior to prescribing opioids. If the search indicates that other opioids are being used, the patient should be questioned about the additional medications. If the clinical assessment supports the use of additional opioids, only a limited supply should be prescribed under carefully monitored conditions. (See Section 3.3.4, Use of CURES to Ensure Safe and Effective Opioid Use)
4. Documentation is provided in the medical record that the following conditions are not present. These conditions are a relative contraindication to initiating opioids: Depression, anxiety, personality disorder, untreated sleep disorders, current or past substance abuse, drug seeking behavior, other psychotropic medications, PTSD, cognitive impairment, COPD, severe obesity, balance problems/fall risk, osteoporosis, and renal failure. If any of these conditions are present, written documentation must be provided to justify the use of opioids.
5. The use of sedative-hypnotics including anti-histamines (H_1-blockers) and/or benzodiazepines has been discontinued before prescribing opioids. (Fulton-Kehoe 2013) (See Section, Concurrent Use of Benzodiazepines and Other Sedative Hypnotics)
6. There is no use of illicit substances or of substances that should not be taken concomitantly (e.g., sedating medications including alcohol and benzodiazepines). (Fulton-Kehoe 2013) The use of illicit substances is a contraindication to opioid

treatment. (See Section 7, Concurrent Use of Benzodiazepines and Other Sedative Hypnotics)

- Clinical practice should include the following:

1. Opioids should be initiated as a "trial" to ascertain whether the selected opioid produces functional improvement.

2. Document clinically meaningful improvement in pain and function during the acute phase (See Section 3.3.7: Monitoring Effectiveness of Chronic Opioid Treatment: Tracking Pain and Function and Determining Clinically Meaningful Improvement)

3. Generally opioids should be prescribed at night or when not at work.

4. Only one opioid should be prescribed. The lowest dose capable of providing analgesia is preferable.

- In general, doses for opioid-naïve patients should not exceed 80 mg/day MED. (See Section, 3.3.8, Opioid Titration and Dosing)

5. A short course (limited supply) of opioid medication should be prescribed.

6. Weaker opioids and the lowest effective dose should be used. Stronger opioids may be considered only if weaker ones are ineffective or not tolerated. The FDA categorizes drugs into five Schedules (from I to V). (US FDA CFR Title 21, Chapter 13) Schedule V drugs (weakest) have the lowest potential for abuse and Schedule I drugs (strongest) are considered to have the highest potential for abuse. (US FDA CFR Title 21, Chapter II, Part 1308)

7. Providers may consider using screening tools or obtaining a consult with a pain specialist at any point prior to the 4th week if they feel it is warranted. (See Appendix A, Brief, Validated Tools, Section 3.3.1, Screening for Risk of Addiction to Opioids or Adverse Events Prior to Initiation of Chronic Opioid Treatment, Section 3.3.6, and Section 6, Pain Medicine Consultation)

8. A gradual increase in physical activity and activities of daily living should be part of the treatment regimen as the patient progresses.

9. Clinicians should monitor for indications for discontinuing opioids including:

a. Resolution of pain or improvement to the point of not requiring opioids within the expected timeframe for the injury being treated.

b. Lack of improved function despite adherence to the treatment regimen.

c. Intolerance or severe adverse effects: it is likely that at least some side effects will occur with opioid use. The nature and severity of side effects should be considered when deciding whether to discontinue the medication.

d. Non-compliance, surreptitious medication use, aberrant drug screening results, diversion, consumption of medications or substances when advised to not take simultaneously.

10. Patients who have been treated for more than two weeks should have opioids discontinued via tapering. (See Section 3.3.8, Opioid Titration and Dosing)

11. Patients should be cautioned about the potential adverse effects of opioid medications, including impacts on alertness. Driving and operation of heavy equipment should be discouraged while on these medications. (See Appendix B, Sample of a Written Opioid Treatment Agreement)

12. At the time of initial prescription, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:

The physiologic benefit of the use of opioids for treating pain due to severe acute injuries is well described. The use of opioids to treat pain must be balanced with the need to prevent misuse and adverse effects.

1.4. Opioids for Post-Operative Pain

Opioid use for a limited duration is recommended for management of post-operative pain management in addition to other treatments, especially during the immediate post-operative period and for moderate to extensive surgical procedures (e.g., arthroplasty, lumbar fusion). (Gaskell 2009; Moore RA 2011; Toms 2007)

- Considerations for prescribing opioids for post-operative pain include the following:
  1. Treatments with other non-opioid medications have failed to provide relief or are contraindicated. Opioids are indicated to obtain sleep for evenings after surgery, and they are also indicated for daytime use to alleviate severe post-operative pain. Non-opioid medications (e.g., NSAIDs, acetaminophen) should be prescribed along with opioid medications.
  2. The CURES database is checked and the results documented prior to prescribing opioids. If the search indicates that other opioids are being used, the patient should be questioned about the additional medications. If the clinical assessment supports the use of additional opioids, only a limited supply should be prescribed under careful monitored conditions. (See Section 9, Managing Perioperative Pain in Workers on Chronic Opioid Treatment Undergoing Elective Surgery)
  3. Patients with more than one of the following conditions should be carefully monitored as inpatients; these conditions are relative contraindications for opioid use following hospital discharge: Anxiety, depression, personality disorder, current or past substance abuse, drug seeking behavior, untreated sleep disorders (particularly sleep apnea), use of other psychotropic medications, post-traumatic syndrome disorder (PTSD), cognitive impairment, cerebrovascular disease, balance problems/fall risk, COPD, chronic hepatitis, cirrhosis, renal failure, severe obesity, and osteoporosis. (Haack 2012)
  4. The use of illicit substances is a contraindication to opioid use following hospital discharge. (Fulton-Kehoe 2013)
- Clinical practice should include the following:

1. Discontinue sedative-hypnotics including anti-histamines (H_1-blockers) and/or benzodiazepines before surgery. (Fulton-Kehoe 2013) (See Section 7,Concurrent Use of Benzodiazepines and Other Sedative Hypnotics)
2. Post-operative opioid use is recommended at night as needed for pain-interrupted sleep. Use during the daytime may generally be indicated for up to a few days to overcome severe post-operative pain, following which tapering to nocturnal use only should occur as soon as possible.
3. Opioids to control postoperative pain are adjuncts to other treatments such as NSAIDs (used when the risk of bleeding is not a concern), progressive exercises, and other modalities.
4. In general, doses for opioid naïve patients should not exceed 80 mg/day MED. (See Section 3.3.8, Opioid Titration and Dosing).
5. Weaker opioids and the lowest effective dose should be used. Stronger opioids may be considered only if weaker ones are ineffective or not tolerated. The FDA categorizes drugs into five Schedules (from I to V). (US FDA CFR Title 21, Chapter 13) Schedule V drugs (weakest) have the lowest potential for abuse and Schedule I drugs (strongest) are considered to have the highest potential for abuse. (US FDA CFR Title 21, Chapter II, Part 1308)
6. For less extensive procedures, opioid use should not extend beyond two to three weeks.
7. For more extensive surgical procedures, use for up to three months may be considered during recovery. Written documentation should be provided regarding the status of pain and function.
8. For patients treated with opioids for one to three months postoperatively, the opioid use recommendations for management of subacute pain apply (See Section 2.2, Opioids for Subacute Pain). With rare exceptions, only nocturnal use is recommended in the second and third months of post-operative opioid use.
9. If opioids are continued for treatment pain beyond four weeks post-operatively, screening tools for substance (drugs and alcohol) misuse/abuse, as well as

psychosocial conditions should be used. (See Section 3.3.1.1, Screening for Drug Misuse/Abuse and Section 3.3.1.2 Screening for Alcohol Misuse/Abuse) If aberrant results are obtained, providers should consider obtaining a consult with a pain specialist (See Section 6, Pain Medicine Consultation) or conducting urine drug screening (See Section 3.3.6, Use of Urine Drug Testing [UDT])

10. Following discharge, patients should have periodic visits to monitor efficacy, adverse effects, compliance and surreptitious medication use. Towards this end, providers should document their assessments and may consider using screening tools, obtaining a consult with a pain specialist or conducting urine drug screening at any point, if they feel it is warranted.
11. Clinicians should monitor for indications for discontinuing opioids, including:
    a. Resolution of pain or improvement to the point of not requiring opioids within the expected timeframe for the injury being treated.
    b. Lack of improved function despite adherence to the treatment regimen.
    c. Intolerance or severe adverse effects. It is likely that at least some side effects will occur with opioid use; the nature and severity of side effects should be considered when deciding whether to discontinue the medication.
    d. Non-compliance, surreptitious medication use, aberrant drug screening results, diversion, consumption of medications or substances when advised to not take simultaneously.
12. Patients who have been treated with opioids for more than two weeks should have opioids discontinued via tapering, as opposed to abrupt cessation. (See Section 4, Indications and Methods for Tapering Opioids)
13. Patients should be cautioned about the potential adverse effects of opioid medications, including impacts on alertness. Driving and operation of heavy

equipment should be discouraged while on these medications. (See Appendix B, Sample of a Written Opioid Treatment Agreement)

14. At time of discharge, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

See Section 9, Managing Peri-Operative Pain in Workers on Chronic Opioid Treatment Undergoing Elective Surgery, for management of patients who are being treated with opioids prior to surgery.

Rationale:
Sufficient pain control during the postoperative phase is needed to ensure rapid and adequate recovery of function.

2. Opioids for Subacute Pain (1–3 Months)

If pain extends beyond the acute phase (beyond one month following onset), the use of non-pharmacological treatments such as cognitive-behavioral therapy, activity coaching, graded exercise, and other treatments such as acupuncture should be continued.

- If opioids are being considered beyond the acute phase, the following clinical practices should be followed:
  1. The folowing conditions are a relative contraindication to continuing opioids during the subacute phase: Depression, anxiety, personality disorder, untreated sleep disorders, past substance abuse, drug seeking behavior, other psychotropic medications, PTSD, cognitive impairment, COPD, severe obesity, balance problems/fall risk, osteoporosis, and renal failure. If any of these conditions are present, written documentation must be provided to justify the use of opioids. Current substance use disorder is a contraindication to continued opioid treatment.
  2. Medically indicated non-opioid treatments should be continued:

- Pharmacologic therapy with non-opioid pain medications (e.g., acetaminophen, NSAIDs).
- Physical activity, including rest, passive and active range of motion, and physical therapy with graded exercise matched to the injury.
- Complementary/alternative modalities, such as acupuncture.

3. Consult CURES again to ensure that the use of prescribed narcotics continues to be consistent with the history and prescription record.
4. Continue documenting clinically meaningful improvement in pain and function during the subacute phase. (See Section 3.3.7, Monitoring Effectiveness of Chronic Opioid Treatment: Tracking Pain and Function and Determining Clinically Meaningful Improvement)
5. Screening for risk using validated tools is medically indiated, if this has not already been done in the acute pain phase. (See Section 3.3.5, Use of Tools to Monitor Patients on Chronic Opioid Treatment)
6. Administer a baseline urine drug test (UDT) in the office toward the beginning of the subacute period (4-6 weeks from onset of opioid treatment). (See Section 3.3.6, Use of Urine Drug Testing [UDT] for Initiation and Monitoring of chronic opioid treatment) Aberrant results (e.g., those indicating diversion, use of illicit substances, or medications which have not been prescribed) are a contraindication to continued opioid use. A history of opioid use disorder or substance use disorder is a relative contraindication to continued opioid use during the subacute phase. Prior to prescribing opioids beyond six weeks to patients with a history of substance use disorder, consultation with an addiction specialist should occur.
7. Remind patients at each visit that they should not take benzodiazepines or other sedative-hypnotics or drink alcohol while on opioids. Discontinue opioids or taper

sedative-hypnotics and/or benzodiazepines if the patient is found to be taking them against provider's advice.

8. As during the acute treatment phase, opioids should be used at the lowest dose capable of producing analgesia and improving function.
    - In general, doses for opioid naïve patients should not exceed 80 mg/day MED. (See Section 4, Indications and Methods for Tapering Opioids)
    - Weaker opioids and the lowest effective dose should be used. Stronger opioids may be considered only if weaker ones are ineffective or not tolerated. The FDA categorizes drugs into five Schedules (from I to V). (US FDA CFR Title 21, Chapter 13) Schedule V drugs (weakest) have the lowest potential for abuse and Schedule I drugs (strongest) are considered to have the highest potential for abuse. (US FDA CFR Title 21, Chapter II, Part 1308)
9. Clinicians should monitor for indications for discontinuing opioids, including:
    - Resolution of pain or improvement to the point of not requiring opioids within the expected timeframe for the injury being treated.
    - Lack of improved function despite adherence to the treatment regimen.
    - Intolerance or severe adverse effects: it is likely that at least some side effects will occur with opioid use. The nature and severity of side effects should be considered when deciding whether to discontinue the medication.
    - Non-compliance, surreptitious medication use, aberrant drug screening results, diversion, consumption of medications or substances when advised to not take simultaneously.
10. Patients who have been treated for more than two weeks should have opioids discontinued via tapering, rather than abrupt cessation. (See Section 4, Indications and Methods for Tapering Opioids)

11. Patients should be cautioned about the potential adverse effects of opioid medications, including impacts on alertness. Driving and operation of heavy equipment should be discouraged while on these medications. (See Appendix B, Sample of a Written Opioid Treatment Agreement)

12. At each evaluation, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:
With rare exceptions, resolution of pain and resumption of regular function is anticipated after four to six weeks. The provider should carefully consider non-opioid alternative treatments and document the absence of factors that would increase the risk of harm prior to continuing opioid use.

3. Opioids for Chronic Pain and Chronic Opioid Treatment

The term “chronic pain” is defined in this guideline as pain lasting three or more months from the initial onset of injury pain (i.e., over 12 weeks). Patients with chronic pain may be candidates for treatment with opioids if pain management and functional improvement have not been achieved with other treatment modalities, including passive and active movement, cognitive behavioral therapy, and other practices such as acupuncture. Patients who require treatment with opioids to relieve pain or improve function for durations longer than three months are considered as being on chronic opioid treatment.

Overview of Recommendations Regarding Chronic Opioid Treatment

Steps that should be taken by prescribing physicians who are considering chronic opioid treatment are listed below and described in more detail in Section 3.3, Initiating and Monitoring Chronic Opioid Treatment.

- Prior to initiating opioids for chronic pain or chronic opioid treatment, the following steps should be taken and documentation provided in the medical record:

    1. Perform a comprehensive evaluation and assessment. (See Section 3.1, Comprehensive Evaluation and Assessment of Patient)
    2. Consider alternative treatments. (See Section 3.2, Consideration of Alternative Treatments for Chronic Pain and Chronic Opioid Treatment)
    3. Screen for risk of addiction or adverse events. (See Section 3.3.1, Screening for Risk of Addiction to Opioids or Adverse Events Prior to Initiation of Chronic Opioid Treatment)

        - Screen for drug misuse/abuse. (See Section 3.3.1.1, Screening for Drug Misuse/Abuse)
        - Screen for alcohol misuse/abuse. (See Section 3.3.1.2, Screening for Alcohol Misuse/Abuse)
        - Screen for additional psychosocial factors contributing to substance misuse/abuse. (See Section 3.3.1.3, Screening for Additional Psychosocial Factors Contributing to Substance Misuse/Abuse)

    4. Complete patient treatment agreement/informed consent and discuss with patient. (See Section 3.3.2, Patient Treatment Agreement and Informed Consent)
    5. Initiate a trial period of opioid treatment. (See Section 3.3.3, Initiation of Chronic Opioid Treatment)

- Based on the above, if the decision is made to initiate chronic opioid therapy, the following medically indicated steps must be taken:

    1. Use CURES to ensure safe and effective opioid use. (See Section 3.3.4, Use of CURES to Ensure Safe and Effective Opioid Use)
    2. Use questionnaires and other validated screening tools to monitor chronic opioid therapy. (See Section 3.3.5, Use of Tools to Monitor Patients on Chronic Opioid Treatment)

3. Use urine drug testing for initiation and monitoring of chronic opioid therapy. (See Section 3.3.6, Use of Urine Drug Testing [UDT])
4. Monitor the effectiveness of chronic opioid therapy by tracking pain and function. (See Section 3.3.7, Monitoring Effectiveness of Chronic Opioid Treatment: Tracking Pain and Function and Determining Clinically Meaningful Improvement)
5. Monitor and adjust dose of patients on chronic opioid therapy. (See Section 3.3.8, Opioid Titration and Dosing)
6. Monitor and make dose adjustments during the maintenance period. (See Section 3.3.9, Maintenance of Chronic Opioid Treatment)
7. Make regular efforts to taper opioids. (See Section 4, Indications and Methods for Tapering Opioids)

3.1. Comprehensive Evaluation and Assessment of Patient

Evaluation and assessment prior to initiating treatment with opioid medications beyond the subacute period (three or more months after initiation of opioid treatment) should include the following:

1. Identify the cause of the pain and develop an appropriate differential diagnosis.
2. Assess prior treatments for the current condition, documenting their effectiveness, adverse effects, and appropriateness.
3. Assess and document the severity of pain (using a numerical rating scale), pain interference (using pain inventory instruments), and function (using validated patient reported questionnaires), even if this has been done during the acute or subacute periods of treatment. This will establish a baseline and thus serve as a basis to track outcomes of chronic opioid treatment.

4. Assess psychological and social factors and co-morbid medical or mental health conditions that may compromise the safe use of opioids to treat chronic pain and document the following. (See subsections of Section 3.3.1, Screening for Risk of Addiction to Opioids or Adverse Events Prior to Initiation of Chronic Opioid Treatment)

5. Evaluate for the presence of co-morbid psychiatric conditions (e.g., depression, anxiety, PTSD) that may impact pain treatment in general and chronic opioid treatment specifically. (See Section 3.3.1.3, Screening for Additional Psychosocial Factors Contributing to Substance Misuse/Abuse) These factors include:

    - A history of substance abuse, misuse, or addiction (See Section 3.3.1.2, Screening for Alcohol Misuse/Abuse)

    - Use of current medications that might negatively interact with other medications used for pain treatment. Particular attention should be given to identifying use of benzodiazepines or other sedative-hypnotics, which should not be prescribed simultaneously with opioids. (See Section 7, Concurrent Use of Benzodiazepines and Other Sedative Hypnotics)

    - The presence of any medical factors that could complicate treatment of pain in general or increase risks of adverse events with chronic opioid treatment, including any pertinent laboratory tests specific to the patient's circumstances. If not already identified in the acute phase, assess for the following conditions: Depression, anxiety, personality disorder, untreated sleep disorders (particularly sleep apnea), current or past substance abuse, drug seeking behavior, other psychotropic medications, PTSD, cognitive impairment, medication allergies, cardiac disease, COPD, chronic hepatitis, cirrhosis, cerebrovascular disease, severe obesity, balance problems/fall risk, osteoporosis, and renal failure. (Haack 2012)

These conditions are relative contraindications to chronic opioid therapy, and in their presence, written documentation should be provided to justify the use of these medications and show that other alternatives have been considered and are not feasible.

- Social factors that may impact pain management including: employment, job satisfaction, marital history, social network, and history of legal problems.

Rationale:

There is agreement across guidelines that the potentially serious adverse effects of chronic opioid treatment warrant comprehensive assessment to avoid potential complications.

3.2. Consideration of Alternative Treatments for Chronic Pain and Chronic Opioid Treatment

Non-opioid alternative therapies for pain treatment should be tried before resorting to chronic opioid therapy. In addition, these treatment modalities should be continued even if opioids are used for relieving chronic pain:

  - Pharmacologic therapy with non-opioid pain medications (e.g., acetaminophen, NSAIDs)
  - Physical activity, including rest, passive and active range of motion, and physical therapy/occupational therapy with graded exercise matched to the injury
  - Psychological/behavioral therapy
  - Complementary/alternative modalities, such as acupuncture
  - Interventional treatments

- Refer to the Medical Treatment Utilization Schedule (MTUS) Chronic Pain Medical Treatment Guidelines of California's Division of Workers' Compensation (DWC) for specific recommendations for non-opioid treatment of chronic pain. (DWC 2009)

Rationale:

The guidelines reviewed offer consistent recommendations that alternative treatments for chronic pain are often medically indicated and offer benefits and promote recovery without many of the side effects of opioid treatment.

3.3. Initiating and Monitoring Chronic Opioid Treatment

3.3.1 Screening for Risk of Addiction to Opioids or Adverse Events Prior to Chronic Opioid Treatment

3.3.1.1 Screening for Drug Misuse/Abuse

Screening for drug misuse or abuse should be performed in two situations:

1. Prior to initiating a trial of chronic opioid treatment, screening should be performed to predict the probability of a patient engaging in drug misuse/abuse when prescribed opioids for chronic pain. (See Appendix G, Summary of Screening and Monitoring Recommendations)
2. During the opioid trial or during chronic opioid treatment, screening should be performed as needed to identify current abuse/misuse of opioid medications. (See Appendix G, Summary of Screening and Monitoring Recommendations)

Validated screening tools for drug misuse, such as Opioids Risk Tool (ORT), Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP-R[1]), or others, should be used and the results documented. ORT, Patient Medication Questionnaire (PMQ), and SOAPP-R are questionnaires for predicting high-risk patients, whereas the Current Opioid Misuse Measure (COMM[2]) and the Prescription Opioid Misuse Index (POMI[3]) are questionnaires designed to identify current abuse/misuse of opioids. (See Appendix A1, Tools to Screen for and Monitor High-Risk Patients)

[1] http://www.painedu.org/soap.asp

[2] http://www.painedu.org/soap.asp

[3] http://www.oasas.ny.gov/AdMed/FYI/pomifyi.cfm

- If the screening tools identify a predicted increased risk for substance misuse/abuse, chronic opioid treatment should only be initiated if other alternatives are not viable; in this case, documentation should be provided in the medical record that attempts are being made to address the identified risks.
- If the screening tools suggest current drug misuse or abuse, urine drug screening may be considered. (See Section 3.3.6, Use of Urine Drug Testing [UDT] for Initiation and Monitoring of chronic opioid treatment)
- Routine genomic testing to predict adverse effects of opioids, including potential abuse or addiction, is not recommended.

Rationale:

A personal history of illicit drug and alcohol use are predictors of opioid misuse or abuse. The literature indicates that validated screening tools may be used to identify patients who may be currently misusing opioids as well as those at risk for future misuse; this will help to guide decision making for chronic pain treatment. Evidence that genetic testing reliably predicts the potential for abuse is currently lacking. (Racoosin 2013)

3.3.1.2 Screening for Alcohol Misuse/Abuse

- The CAGE-AID questionnaire should be completed and the results documented prior to initiating a trial of chronic opioid treatment. (See Appendix G: Summary of Screening and Monitoring Recommendations)
- If the screening tools identify a predicted increased risk for alcohol misuse/abuse, documentation should be provided to address the identified risks prior to continuing or initiating chronic opioid treatment.

Rationale:

Most current guidelines agree on this approach.

3.3.1.3 Screening for Additional Psychosocial Factors Contributing to Substance Misuse/Abuse

- Use a validated tool to screen for depressive symptoms (e.g., PHQ-9) to document results prior to initiating a trial of chronic opioid treatment. (See Appendix G, Summary of Screening and Monitoring Recommendations)
- The presence of other mental health conditions such as anxiety disorder, severe sleep disorder, PTSD or suicidal ideation should be assessed and documented.
- If the screening tools identify a mental health condition, these conditions should be documented and consultation with a licensed mental health professional obtained prior to initiating a trial of chronic opioid treatment.
- Chronic opioid treatment should not be initiated during acute psychiatric instability or if suicide risk is identified. Referral should be made to an appropriate mental health professional if these conditions are identified by the clinician.

Rationale:

Mental health disorders are a strong risk factor for both misuse/abuse and opioid overdose events. (Grattan 2012; Johnson 2013; Martins 2012; Outcalt 2013; Wassan 2007) Several guidelines provide strong recommendations for screening for these conditions. (ACOEM 2011, WA AMDG 2010, and US VA 2010)

3.3.2. Patient Treatment Agreement and Informed Consent

A patient treatment agreement is a method for informing patients about potential risks and benefits of opioid use, relative responsibilities in the physician/patient relationship. In addition, an agreement allows the physician to obtain permission from the patient to conduct random urine drug tests. Both the patient and physician sign the agreement after reviewing its contents.

- Prior to initiating a trial of chronic opioid treatment, a written patient treatment agreement adherent to the principles described in the above section should be signed by the treating health care provider and patient. (See Appendix B for a

sample and Appendix G, Summary of Screening and Monitoring Recommendations)

- The treatment agreement should address:
    - Consequences to the patient if evidence of diversion, misuse, or abuse comes to light
    - Details of the opioid trial (See Section, 3.3.3, Initiation of Chronic Opioid Treatment)
    - Alternative therapies available and potential adverse effects of opioid treatment
    - Activity limitations during opioid treatment (e.g., driving, operating machinery)
    - Responsible storage and disposal of opioid medications.
- The treatment agreement should be introduced when chronic opioid treatment begins.
    - The treatment agreement should be reviewed and updated with new signatures annually.
    - The treatment agreement should be updated if the patient does not adhere to the treatment plan.
- If misuse, abuse, or diversion is identified while the patient agreement is in force and the treating physician continues chronic opioid treatment, or if the original agreement terms are modified, documentation should be provided addressing the issue of concern and why and how the original agreement was modified.

Rationale:

The use of a treatment agreement is recommended to document patient understanding, involvement in their care, and agreement with expectations during opioid treatment.

3.3.3. Initiation of Chronic Opioid Treatment

- Initiation of opioids for the treatment of chronic pain should be considered a trial to assess efficacy (degree and duration of pain reduction, improvements in function, quality of life) and side effects. The trial of opioid treatment for a period up to several weeks should not be considered a commitment to long-term therapy.

- The following clinical practices are recommended for initiating chronic opioid therapy (FSMB 2013)
    1. The initiation of opioids should be described as a therapeutic trial for a limited period of time (typically no more than 90 days).
    2. The physician should explain that progress will be carefully monitored for both benefit and harm in terms of efficacy (pain reduction, improvement in function and quality of life) and adverse effects.
    3. The lowest dose possible dose should be given initially and titrate to effect.
    4. Opioid therapy should begin with a short-acting opioid. Longer-acting opioids may be considered only if the shorter-acting medications are not effective.

- The provider should follow these clinical practices:

    1. Consult CURES both prior to the opioid trial. CURES may also be consulted during the trial period based on provider's assessment of need. (See Section 3.3.4 Use of CURES to Ensure Safe and Effective Opioid Use)

    2. Conduct urine drug screening prior to the trial. Urine drug screening may be repeated during the trial period, based on the provider's assessment of need. (See Section 3.3.6, Use of Urine Drug Testing [UDT] for Initiation and Monitoring of Chronic Opioid Treatment)

    3. Prior to the trial, use screening tools to identify patients at high risk of aberrant behavior. Other screening tools to identify concurrent abuse may be used during the trial period, based on the provider's assessment of need.

(See Section 3.3.1 Screening for Risk of Addiction to Opioids or Adverse Events Prior to and During Initiation of Chronic Opioid Treatment)

Appendix G contains a summary of screening and monitoring recommendations.

- Intravenous, intramuscular, submucosal, and transdermal (except buprenorphine) administration of opioids for chronic pain are discouraged if the patient is able to tolerate oral medication.

Rationale:

A trial period of opioid use prior to initiating chronic treatment is a precautionary recommendation to assess and document pain relief, functional improvement, titrate dose, and establish patient expectations to minimize potential adverse impacts. (FSMB 2013)

3.3.4. Use of CURES to Ensure Safe and Effective Opioid Use

CURES is California's Prescription Drug Monitoring Program (PDMP). Providers should query the CURES database and document results in all of the following situations

- Prior to any first prescription for an opioid (i.e., in the acute pain phase, as well as before surgery).
- At the start of the subacute phase (four weeks following initial injury) and during the subacute period (4–12 weeks) if opioids are used.
- If chronic opioid treatment is continued, periodic checks should be performed based upon risk of diversion, misuse or abuse. The following schedule is recommended:
    1. Before the initiation or trial period for chronic opioid treatment
    2. At least quarterly during titration to a "maintenance dose"
    3. At least annually during maintenance, and
    4. More often for patients at high risk for substance abuse.

- If an unscheduled healthcare appointment results in an additional prescription for opioids (e.g. at an emergency room).

Rationale:

Evidence-based and expert, consensus-derived guidelines reviewed recommend evaluating current opioid use before a provider writes the first prescription. Studies suggest that approximately 5% of new claimants entering the workers' compensation system have received opioid prescriptions prior to injury. Of these, about 40% were already receiving chronic opioid treatment. (WA 2013) The goal of checking CURES after starting a trial of opioids is to verify that the patient has not received additional prescriptions since starting the trial. (Utah 2009; WA 2013) Accessing CURES periodically during chronic treatment, or if an unexpected visit or event occurs, aids in verifying appropriate use and identifying misuse. (Neven 2012; Juurlink 2013)

3.3.5. Use of Tools to Monitor Patients on Chronic Opioid Treatment

Tools such as the COMM and the POMI should be used in combination with clinical assessment to assess for aberrant behavior and to determine whether chronic opioid treatment should be discontinued. (See Section 4.1, Indications for Tapering Opioids) (Butler 2007; Butler 2011; Knisely 2008)

Rationale:

While there are no definitive studies to recommend any one tool over another, the use of validated screening instruments is an aid to clinical assessments in identifying aberrant behavior related to opioid treatment.

3.3.6. Use of Urine Drug Testing (UDT)

Periodic drug testing is useful in assessing adherence to the treatment plan and in detecting the use of non-prescribed substances. While various biologic media may be used

for drug testing, urine testing is preferred because it is convenient to collect and store, and testing is cost-effective and relatively easy to obtain.

UDT Process:

Standardized protocols should be developed in consultation with the testing laboratory and followed to ensure proper collection, handling, storage, and shipping of urine specimens. (Kahan 2011) Procedures should ensure compliance with local, state, and federal requirements pertaining to laboratory testing, such as the Clinical Laboratory Improvement Amendments (CLIA[4]). When UDT is conducted as part of pain treatment, forensic standards (such as those required by the Department of Transportation for employer drug testing programs) are generally not necessary, so it is not necessary to observe specimen collection and follow chain-of-custody protocols.[5] (US DoT; FSMB 2013)

Type of UDT:

- An initial UDT may be performed at a point of collection (in an office or in the field). The standard practice includes a measurement of temperature, specific gravity, and a panel of drugs. Point of collection (POC) screening with immunoassays should be considered an initial approach to test for multiple

[4] "Congress passed the Clinical Laboratory Improvement Amendments (CLIA) in 1988 establishing quality standards for all laboratory testing to ensure the accuracy, reliability and timeliness of patient test results regardless of where the test was performed. A laboratory is any facility that does laboratory testing on specimens derived from humans to give information for the diagnosis, prevention, treatment of disease, or impairment of, or assessment of health."
http://www.fda.gov/medicaldevices/deviceregulationandguidance/ivdregulatoryassistance/ucm124105.htm
(Accessed on February 12, 2014.)

"The Clinical Laboratory Improvement Amendments of 1988 (CLIA) law specified that laboratory requirements be based on the complexity of the test performed and established provisions for categorizing a test as waived. Tests may be waived from regulatory oversight if they meet certain requirements established by the statute. The section of the statute specifying the criteria for categorizing a test as waived was excerpted without elaboration in the regulations at 42. CFR 493.15(b) and 493.15(c) contains a list of these waived tests."
http://www.fda.gov/medicaldevices/deviceregulationandguidance/ivdregulatoryassistance/ucm124202.htm
(Accessed on February 12, 2014.)

[5] http://www.dot.gov/odapc/mro

drug classes and provide rapid results. However, results should be interpreted with caution because immunoassays (1) cannot detect alcohol and some prescribed opioids (e.g., Fentanyl and Oxycodone), (2) do not detect the presence of benzodiazepines with much accuracy, and (3) are subject to false positive and negative results.

- Testing performed in federally-certified laboratories that use a two-step testing process, enzyme-mediated immunoassay followed by gas chromatography mass spectrometry (GC/MS) or liquid chromatography mass spectrometry (LC/MS/MS), should be utilized if verification is required of positive results from POC screening or if a specific drug or metabolite needs to be identified. If POC testing has been performed, laboratory-based immunoassays do not need to be repeated.
- Both POC screening and lab-based immunoassay tests are subject to false negative and false positive results. Therefore, any positive result should be followed by confirmatory testing by a laboratory with GC/MS or LC/MS (described above).
- In addition to testing for the prescribed opiate medication, depending on the clinical circumstances, testing for additional drugs, including the following, may be considered using laboratory-based GC/MS or LC/MS/MS (WA AMDG 2010):

Table 1. Drugs to Test Using UDT

Prescribed and additional opiates	Cannabinoids
Alcohol	Cocaine
Amphetamines	Fentanyl
Barbiturates	Methadone
Benzodiazepines	Oxycodone

See Appendix C (Guidance on Conducting and Interpreting Urine Drug Testing) for additional information.

Frequency of UDT:

- Urine drug screening should be performed at the following phases to document absence of opioids (non-compliance), presence of unprescribed drugs (prescription drug abuse), and/or presence of illicit drugs.
  - Prior to initiating treatment with opioids during the subacute phase (four weeks following injury). (See Appendix G, Chart Summary of Screening and Monitoring Recommendations)
  - Prior to initiating a trial of chronic opioid treatment. Urine drug screening may be repeated during the trial period, based on the provider's assessment of need.
  - During chronic opioid treatment, UDT should be conducted on a random basis and adjusted in frequency as relevant after assessment for risk of abuse, misuse or diversion.

- UDT should be performed at least twice annually and up to four times a year on all patients on chronic opioid treatment. UDTs should be performed more frequently (i.e., four times a year) in patients on doses greater than 80 mg/day MED.

o The frequency of UDTs may be adjusted based upon risk assessment. Additional UDTs may be performed after documenting the following:

- Provider concern: Misuse, abuse, or diversion
- Basis for this concern: Why is there concern for misuse, abuse or diversion?
- How to use the results of urine drug screening:

o If the initial UDT detects opioids or illicit substances, the results should be documented and considered a relative reason to discontinue opioids.

o If UDT indicates illicit substance, but after weighing the potential adverse impacts and alternatives opioid treatment still appears the best option, the provider should provide appropriate written documentation explaining why detection of the unexpected substances does not prevent treatment with opioids, particularly chronic opioid therapy.

o If two-step UDT in a certified laboratory confirms that the patient is not taking the prescribed medications, suggesting possible medication diversion, the clinician should discuss the findings with the patient and discontinue treatment with opioids.

o It is important that all test results that suggest opioid misuse or abuse be discussed with the patient. These discussions should occur in a positive, supportive fashion, to encourage trust in the provider and healthy behaviors. Both the test results and

discussion with the patient should be documented in the medical record. (FSMB 2013)

The recommended timing and frequency of UDT is summarized in the table below:

Table 2. Timing and Frequency of UDT

Rationale for UDT	Timing of UDT
Based on duration of opioid treatment	
At beginning of subacute phase of treatment	Four weeks after opioids are started to treat acute injury
Chronic opioid treatment	Three months after opioids are started to treat injury (Prior to initiating a trial; additional tests during the trial based on assessment of need)
	On a random basis during chronic treatment; adjusted in frequency as relevant after assessment for risk of abuse, misuse or diversion (see below)
	2-4 times a year on all patients on chronic opioid treatment
	4 times a year on patients on > 80 mg/day MED
Based on Risk of Misuse	
Low	Once a year
Moderate	Up to twice a year
High or opioid dose > 80 mg/day MED	Four times a year

Rationale:

Every major guideline reviewed makes similar recommendations for the frequency and use of urine drug screening. There is fair evidence: (1) that UDTs provide diagnostic accuracy, (2) that UDTs identify patients who are non-compliant or abusing prescription drugs or illicit

drugs, and (3) that UDTs may decrease prescription drug abuse or illicit drug use when patients are in chronic pain management therapy. (ASIPP 2012)

3.3.7. Monitoring Effectiveness of Chronic Opioid Treatment: Tracking Pain and Function and Determining Clinically Meaningful Improvement

3.3.7.1 Tracking Pain and Function to Monitor Effectiveness of Chronic Opioid Treatment

Monitoring the effectiveness of opioids and giving strong consideration to weighing the risks and benefits throughout the period of opioid use is crucial to maximizing potential benefit and avoiding serious short- or long-term adverse consequences.

Several methods are used for tracking pain and function. To provide consistency, pain and function should be tracked with validated instruments. Reliance on informal inquiry or observation, physical therapy notes, and similar non-standard and scientifically unvalidated methods are unreliable and lead to inconsistent tracking of effectiveness across practice types and systems. In order to track pain intensity, most guidelines rely on a 10-point, scale such as a numerical rating scale or visual analog scale. The most valid and consistent method to track function is to routinely measure physical function by documenting actual physical performance, including exertional capacity, degree of flexibility, and improved strength. An additional or alternate method is to track the types of physical function most meaningful to the patient, such as measures of the ability to stand, sit, lift, and carry.

The following outcomes should be documented when assessing the effectiveness of chronic opioid treatment:

1. Reduction in level of pain via a brief validated instrument (e.g. Numerical rating scale where 0 = no pain and 10 = worst pain imaginable). (See Appendix A2, Tools for Tracking Pain and Function)

2. Functional improvement attributable to the use of opioids via a validated instrument (e.g., the Graded Chronic Pain Scale, the Brief Pain Inventory,

Multidimensional Pain Inventory and the Pain Severity Scale of the SF-12[6]). Pain interference scales (Graded Chronic Pain Scale, Brief Pain Inventory) are brief and sensitive, but not fully reflective of physical function. In addition to tracking function, improved function should coincide with efforts at vocational rehabilitation and return to work. (Kerns 1985) (See Appendix A2, Tools for Tracking Pain and Function)

If there is a discrepancy between the reported improvement in pain, the reported level of function and the described work limitations; an explanation should be provided.

- Frequency with which providers should document patients' pain and function:
  - First three months of opioid therapy following injury: **every visit**
  - One year after initiation of chronic opioid treatment: **monthly**
  - For the duration of chronic opioid treatment: **quarterly**

Rationale:

Most major guidelines reviewed recommend tracking the effectiveness of opioid treatment to improve pain and function. Use of validated instruments is the most consistent, scientifically reliable way to do so. Chronic opioid treatment for work-related injuries, the subject of this Guideline, aims to restore function and not just alleviate pain. If pain is considered the primary barrier to improved function, then chronic opioid treatment should lead to meaningful functional benefit in patients. In other words, a reduction in pain should correspond to increased function. In the absence of improved function, a decrease in pain intensity is not considered clinically meaningful improvement. (See Section 3.3.7.2,

[6] **http://www.sf-36.org/tools/sf12.shtml**

Determining Clinically Meaningful Improvement)

The use of a combined brief instrument to measure both pain and pain interference with function is attractive because of the reliability and validity of several instruments, as well as their public availability, and the fact that this type of instrument would be the least burdensome and costly to administer across most practices. Extensive research shows the reliability, validity and responsiveness of these instruments to change of pain severity. (Dworkin 2008; Ostelo 2008; Von Korff 2011) The Graded Chronic Pain Scale and the PEG[7] three-item scale both meet these criteria. (Krebs 2009) The West Haven-Yale Multidimensional Pain Inventory (WHYMPI) also performs well to assess clinical pain. (Kerns 1985)

The American Chronic Pain Association (ACPA) Quality of Life Ability Scale combines improved function across multiple categories such as work, home, and leisure activities, but this scale has not been validated. However, some physicians find this type of inclusion of specific descriptors useful. (ACPA 2012)

3.3.7.2 Clinically Meaningful Improvement in Pain and Function

Clinically meaningful (at least 30%) improvement in pain and function or pain interference with function during the acute/subacute pain trial periods should be documented prior to initiating chronic opioid treatment. Continuing opioid treatment in the absence of this level of functional improvement is not medically necessary care. This recommendation does not apply to catastrophically injured workers. (See Section 10, Opioid Use in Catastrophic Injuries)

[7] Selected items of the PEG assess average pain intensity (P), interference with enjoyment of life (E), and interference with general activity (G).

Workers already on chronic opioid treatment may not experience a significant improvement in pain and function from one visit to the next while they are on “maintenance doses” of opioids. In these workers, worsening of pain and/or function following attempts to wean to a lower dose, rather than improved function on a maintenance dose, may be a more appropriate indicator of the effectiveness of the weaning attempt.

Rationale:
The existing guidelines and other evidence reviewed suggest that during chronic opioid treatment, many patients may report modest improvements in pain, but no improvement in function. Functional improvement is a basic tenet guiding the provision of care for injured workers. Clinically meaningful improvement in pain and function is a goal of opioid treatment in the worker population.

3.3.8 Opioid Titration and Dosing

Opioid titration refers to dose adjustments of opioid medications as required to adequately control pain and improve function. Opioid titration requires regular assessment of the patient’s pain, and (when used for work-related injuries) functional improvement, as well as the amount of medication used in a defined previous time period.

Decisions to increase opioids should be made jointly by both the provider and the patient. It is the responsibility of the provider to inform the patient that current evidence shows a dose-related increase in adverse events.

The guidelines reviewed recommend increased clinical vigilance at daily doses ranging from 120–200 mg/day MED. (APS/AAPM 2009; US VA 2010; WA AMDG 2010) However, it should be noted that all doses of opioids carry risks and that many deaths associated with opioids have occurred at much lower doses. Note that methadone requires particular attention and care in titration and dosing. (See Section 8, Methadone)

- *Dosage increases*

Providers and patients should recognize that opioid treatment, regardless of dose, carries risks. For dosages above 80 mg/day MED, providers should be increasingly vigilant, as the known risk of adverse events increases while the evidence for increased benefit remains weak. In addition to the level of pain, functional improvement, and amount of medication used in a defined previous time period, providers should document:

- A patient treatment agreement acknowledging that the patient and provider recognize the risk of adverse events is significantly higher at these doses, while the benefit based on available data is unclear. (See Section 3.3.2, Patient Treatment Agreement and Informed Consent, and Appendix B, Sample of a Written Opioid Treatment Agreement)

- The degree of documented meaningful improvement made by the patient and associated with clear-cut participation in formal return to work activities and/or evidence of independent functioning and self-management.

- *Frequency of visits during titration to a stable dose of opioids for chronic treatment:*

    - During titration, regular face-to-face visits should occur every two to four weeks, with ongoing evaluation of progress against pain and toward functional goals as well as potential side effects and adverse events.

    - More frequent follow-up visits should occur if co-existing psychiatric problems, drug-behavior problems, or medical problems are suspected, or when titrating doses above 80 mg/day MED, as the risks of adverse effects increases with increasing dose.

- *Criteria for dosage increase:*

  For each opioid dose increase in patients receiving chronic opioid treatment, all of the following must be documented:

- Patient treatment agreement with informed consent regarding risk/benefit of increasing doses
- Analgesia: Assess meaningful improvement in level of pain (current, recent, trends, etc.)
- Activity: Evaluate meaningful improvement in pain interference or function using validated instruments as well as quality of life
- Adverse events: Assess whether the medication is causing severe side effects. For instance, evidence of severe constipation during the current treatment episode is a clear contraindication for increasing the opioid dose. In the event of an overdose event, the clinician should consider discontinuing opioid medication.
- Aberrant behavior: Evaluate for possible drug abuse-related behavior. No evidence should exist for a current substance use disorder. If the patient has had a history of opioid use disorder, the concurrence of an addiction specialist is required to continue opioid treatment as well as for dose escalation.
- "Analgesia", "Activity", "Adverse events", and "Aberrant behavior" assessments are also known as the "four As." (Trescott 2007) The criteria prescribed here are a modification of the original criteria, specifically targeted to the California injured worker population.

At each evaluation, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Due to lack of sufficient evidence demonstrating its benefits, the routine prescription of naloxone to patients on chronic opioid treatment is not recommended.

Rationale:

A considerable body of medical evidence links increasing doses of chronic opioid treatment with increases in overdose-related morbidity and mortality and lack of efficacy of dose escalation. (Bohnert 2011; Dunn 2010; Gomes 2011; Naliboff 2011) The recommendations above, along with the other recommendations in this Guideline, are aimed at reducing adverse events in California's injured workers.

The best data available to date, summarized above suggest that risk of morbidity and mortality rises substantially at and above 100 mg/day MED (see Appendix E). These same studies demonstrate that the risk also rises in the dose range 50—100 mg/day MED. (Bohnert 2011; Dunn 2010; Gomes 2011) However, none of the studies breaks down the risk within the 50—100 dose range to determine a more nuanced dose level above which risk increases. Based on a review of the best and most recently available scientific evidence to date, 80 mg/day MED has been identified in this Guideline as the dose at which increased vigilance should be exercised.

Of note, other states such as Ohio[8] and Connecticut[9] are implementing guidelines with similar "thresholds." (SCWCC 2014; SMBO 2013)

3.3.9. Maintenance of Chronic Opioid Treatment

Once a stable dose of opioid has been established (maintenance period), patients should have regular face-to-face visits at least every three months with their provider, during which treatment goals, analgesia, activity (function), adverse effects, and aberrant behaviors are monitored.

1. Injured workers who receive chronic maintenance doses of opioids, should meet the

[8] See Ohio's 2013 guideline, which recommends a threshold of 80mg MED and Connecticut's 2013 guidelines, which recommend a threshold of 90mg MED:http://www.med.ohio.gov/pdf/NEWS/Prescribing%20Opioids%20Guidlines.pdf, http://wcc.state.ct.us/download/acrobat/protocols.pdf.

[9] See Connecticut's 2013 guideline, which recommends a threshold of 90mg: http://wcc.state.ct.us/download/acrobat/protocols.pdf

following criteria:

- Patient does not meet conditions for tapering. (See Section 4.1, Indications for Tapering Opioids)

- Additional testing, including quantitative blood levels of prescribed medications and other laboratory testing, as may be deemed necessary to monitor and treat patients receiving chronic opioid treatment is considered part of a medically necessary treatment and monitoring program.

2. At each visit during the maintenance phase of chronic opioid treatment, the "four A's" should be documented (See Section 3.3.8 above, Opioid Titration and Dosing, for additional details). (Trescott 2007) If the patient does not meet any one of the following four criteria,[10] then tapering should be considered. (See Section 4, Indications and Methods for Tapering Opioids)
    - Analgesia: meaningful improvement in level of pain

    - Activity: meaningful improvement in pain interference or function

    - Adverse events: whether the medication is causing severe side effects.

    - Aberrant behavior: No evidence should exist for a current substance use disorder. If the patient has had a history of opioid use disorder, the concurrence of an addiction specialist is required to continue opioid treatment as well as for dose escalation.

3. For injured workers whose dose is above 80 mg/day MED, and who have been on that dose or higher for at least 180 days (6 months), clinicians should conduct semiannual attempts to wean to lower than 80 mg/day MED; referral to a pain specialist may be considered. (See Section 4.2, Methods for Tapering Opioids).

[10] For definitions of these four terms, see Section 3.3.8, Recommendations: Opioid Titration and Dosing.

4. At each evaluation, patients should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:

The continued use of chronic opioid treatment in the injured worker should meet the statutory system goals of restoring the patient to full functional status, with the overall improvement of pain, function and return to work.

3.3.10. Treating Break-Through Pain

Patients who are under treatment with opioids for chronic pain and experience an increase in pain, otherwise known as breakthrough pain (BTP) should undergo a comprehensive assessment for the causative factors, including undertreatment of pain, opioid hyperalgesia, new pathology, drug diversion, dependency, addiction, abuse, and misuse.

Specific treatment should be based on the results of the assessment and should include, as appropriate to the individual case, education, cognitive behavioral therapy, exercise programs, and the addition of non-opioid medications such as nonsteroidal anti-inflammatory drugs (NSAIDS), and interventional techniques.

Rationale:

There is significant controversy regarding the nature of BTP in chronic noncancer pain and its optimal treatment. Systematic reviews recommend evaluation of the causes of episodic pain increase and thoughtful management utilizing the principles of chronic pain management. (Manchikanti 2011c)

4. INDICATIONS AND METHODS FOR TAPERING OPIOIDS

4.1 Indications for Tapering Opioids

Tapering, also known as weaning, refers to reducing the prescribed dose of opioids to the lowest dose effective in controlling pain and improving function. It is recommended that opioids be tapered in most cases to zero in patients who meet any of the criteria listed below. In situations where there may be clinical indications for tapering to a lower dose (and not to zero), clinical justification should be documented. Patients who have been taking over 80 mg/day MED for over 6 months and who are making their semiannual weaning attempt need only wean to below 80 mg/day MED. (See Section 3.3.9 Maintenance of Chronic Opioid Treatment)

Criteria for tapering:

- Patient expresses a desire to discontinue therapy
- Resolution of pain condition
- No documented improvement in pain and function (or patient claims a lack of effectiveness) following last increase in dose
- Patient is non-adherent to the treatment plan (which may become evident through urine drug screening or through consulting CURES)
- Illegal or dangerous activity including: diversion, prescription forgery, suicide attempt, involvement in a motor vehicle accident and/or arrest related to opioids, aggressive or threatening behavior in the clinic. surreptitious medication use, including use of non-prescribed prescription drugs
- Consumption of medication or substances that they have been advised not to take concomitantly (sedating medication, alcohol, benzodiazepines)
- Severe adverse effects or overdose events.

Opioid-naïve, acute pain patients can generally discontinue opioid treatment without the need to taper (i.e., to gradually reduce doses). Acute pain patients should discontinue use of opioids within two weeks whenever possible.

Patients being tapered off opioids should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:
The guidelines reviewed recommend tapering opioid doses when benefit is not demonstrated or there is likelihood of harm or misuse. Tapering, rather than abrupt cessation of medication, prevents withdrawal symptoms and provides the ability to monitor progress on changing treatment regimens in patients on high doses or who have been treated for extended periods.

4.2. Methods for Tapering Opioids

A two-step algorithm method of tapering is recommended with a separate approach for patients meeting Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) criteria for opioid use disorder:

- Step 1: Taper in outpatient setting using 10%–25% per week taper, with or without suboxone support. These cases may require pain medicine specialty and psychological support. Clonidine or other adjunctive agents may be used to provide further support.
- Step 2: Patients who fail step one are at higher risk and should be offered an inpatient detox, accompanied by a multidisciplinary pain program lasting up to 4 weeks. This program may occur at the same time as the inpatient detox or it may occur in an outpatient setting right after the detox. Additionally, patients who have

co-existing cardio-respiratory or other co-morbid conditions that may make outpatient tapering dangerous should be tapered in an inpatient setting.

- Patients who meet the DSM-V criteria for opioid use disorder should be treated by an addiction specialist, preferably concurrently with a pain medicine specialist. Treatment may include therapy in an inpatient multidisciplinary pain program (as described in Step 2 above) or a dedicated inpatient substance abuse center. Maintenance therapy may be needed for 6 months or longer depending on circumstances. In this population, tapering down to zero may thus require several tapering periods that occur over several months.

- In no case where tapering is indicated should a provider abandon a patient. Patient abandonment is defined by the American Medical Association as "termination of a professional relationship between physician and patient at an unreasonable time and without giving the patient the chance to find an equally qualified replacement." (Alspaugh 1967)

- Patients being tapered off opioids should be advised regarding responsible storage and disposal of opioid medications. (See Section 11, Responsible Storage and Disposal of Opioid Medications)

Rationale:

While the guidelines vary in their specific tapering regimens, they consistently recommend gradual, consistent tapers over a period of weeks to months and under careful supervision.

5. DOCUMENTATION OF MORPHINE EQUIVALENTS

The total opioid dose as morphine equivalent dose (MED) in mg/day should be documented at every patient visit. Online dosing calculators may be used for this purpose. (See Appendix F3, Morphine Equivalent Dose (MED) Calculation for additional information)

An opioid dosing calculator can be helpful in tracking the total morphine equivalent dose, along with pain and function, at patient visits. (ACOEM 2011, WA 2010) Online calculators permit calculation of prescribed opioids and should **only** be used to estimate the MED/day.

They should **not** be used to convert from one opioid to another, since the conversions are complex. (See Appendix F3, Morphine Equivalent Dose (MED) Calculation)

Dosing thresholds for select opioids are presented in Appendix F1 (Dosing Thresholds for Selected Opioids) to facilitate conversion or rotation. To assure patient safety, it is recommended that the dose be reduced by 25–50% after calculating the appropriate conversion dose. As an added precaution, consultation with a practitioner with relevant knowledge and experience (such as a pain specialist) may also be considered when converting from one opioid to another.

Rationale:

Several guidelines recommend using a dosing calculator to document dosage as mg/ day MED at each visit and verifying through the use of CURES. This allows the primary prescriber to know the exact dosing and ascertain compliance.

6. PAIN MEDICINE CONSULTATION

The prescribing provider may find it useful to obtain consultation with a pain medicine specialist either prior to escalating the dose or at any time the provider deems it necessary during chronic opioid treatment, even when all criteria have been met. The purpose of such a consultation would be to assist with the complex issues related to the care of patients at all stages of pain.

Consultation of a pain medicine specialist may be considered medically necessary in the following situations, based on clinical assessment:

- At the acute or sub-acute phase, to help assess the risk-benefit ratio of using opioids to treat the pain of high-risk patients.
- To aid with a complex pain condition when there is a need for help with a diagnosis or verification of a diagnosis.

- At the time of initiation or trial of chronic opioid treatment.
- To assist in the management of a patient with significant co-morbidities.
- To assist with the assessment of risk-benefit ratio of chronic opioid treatment when the criteria for dose escalation are met and the prescribing provider requires additional assistance.
- When the provider suspects development of significant tolerance to opioids, particularly at higher doses.
- To assist with the assessment and/or treatment of aberrant behavior or repeated questionable urine drug screening tests.
- To assist with maintenance therapy in patients meeting DSM-V criteria for opioid use disorder.
- To assist with tapering regimens.

Rationale:

Primary care physicians report greater confidence in appropriately managing complex patients and those on chronic opioid treatment when they have access to specialists with pain management expertise. (Franklin 2013)

7. Concurrent Use of Benzodiazepines and Other Sedative Hypnotics during Chronic Opioid Treatment

- Prescribers should avoid introducing concomitant central nervous system (CNS) depressants to chronic opioid treatment regimens, including benzodiazepines and non-benzodiazepine sedatives, such as carisoprodol.

- Central muscle relaxants such as baclofen or tizanidine should be prescribed with extreme caution for patients receiving chronic opioid treatment or other opioid regimens, and monitoring of side effects should be performed upon introduction of a new drug to a regimen or during periods of dose adjustment/escalation.
- Throughout the time when they are on opioids (starting with their first prescription), patients should be counseled to avoid simultaneous use of opioids with non-opioid CNS depressants, including alcohol.
- If, after careful consideration, the clinical decision is made to prescribe other sedatives or muscle relaxants to patients on chronic opioid treatment, counseling should be provided to stagger dosing to avoid excess sedation and potentially disastrous complications.

Rationale:
The available body of literature demonstrates that simultaneous use of opioids and sedating medications, particularly benzodiazepines, is associated with an increased risk of fatal overdose events.

8. METHADONE

The use of methadone is indicated for the following types of patients (CPSBC 2010):

- Patients who have experienced inadequate pain control on previous opioid treatment regimens with dose-limiting side effects.
- Patients experiencing confusion, hallucinations, or delirium on previous opioid (often indicating opioid toxicity).
- Patients intolerant to opioids.
- Patients at high risk for adverse effects to other opioids (e.g., have had previous anaphylaxis to morphine; COPD patients with history of CO_2 retention).
- Patients with opioid addiction.

- Methadone is characterized by a narrow therapeutic window with complicated and variable pharmacokinetics and pharmacodynamics and should be initiated and titrated cautiously by providers who have substantial experience with its use and risks and are prepared to conduct the necessary careful monitoring. (APS/AAPM 2009; Utah 2009)
    - Methadone is a last-line drug that should be started at low doses and titrated slowly. The recommended starting dose is indicated in Appendix F1 (Dosing Thresholds for Selected Opioids) with dose increases occurring no more frequently than weekly. In older patients or those with renal or hepatic comorbidities, less frequent dosing and more cautious dose titration are recommended. (APS/AAPM 2009)
        - Extra caution is warranted in patients at risk for prolonged QTc interval, including those with structural cardiac disease, cardiac arrhythmias, or cardiac conduction abnormalities, and in patients taking another medication associated with QTc interval prolongation. (CPSBC 2010) Clinicians should consider obtaining an electrocardiogram (ECG) to evaluate the QTc interval in patients treated with methadone, especially at higher doses (80 mg/day MED or greater).

Appendix D points out black box warnings on methadone, as well as other opioid medications.

Rationale:

The available literature indicates that methadone is an option when pain relief has not been obtained or intolerable side effects limit the use of other opioids. Because significant toxicity may occur with inappropriate dosing decisions, methadone should be used with caution.

9. MANAGING PERIOPERATIVE PAIN IN WORKERS ON CHRONIC OPIOID TREATMENT UNDERGOING ELECTIVE SURGERY

- **Before surgery (pre-operatively), the surgeon and attending physician should:**
    - Have a coordinated treatment plan for managing surgical pain, including identifying

the post-operative opioid prescriber.

- Obtain a pre-operative anesthesia consult one to two weeks prior to surgery.
    - Obtain consultation for special anesthesia care for workers on buprenorphine at least 2 weeks before surgery.
- Access CURES and review the worker's controlled substance history to get accurate information on opioid dose and concurrent medication use; discuss any apparent discrepancies with the worker.
- Prepare the worker for elective surgery by setting appropriate expectations for pain management. Workers need reassurance that their pain management needs will be met, and they need to know that their opioid use is expected to return to the pre-operative dose, or less, following surgery.
- Avoid escalating opioid dose before surgery.
- Advise patient not to take any benzodiazepines or sedative-hypnotics.
    - For opioid dose and pain management, as well as the advisability of preoperative urine drug screening, consider a consult with a pain medicine specialist before surgery for workers on high-dose opioids or who have comorbid mental health or substance use disorder

- **Day of surgery (intra-operatively), the anesthesiologist should:**
    - Use anti-inflammatory medications, acetaminophen, or both, if not contraindicated.
    - Continue pre-operative opioids to decrease the risk of withdrawal symptoms and use regional blocks, if appropriate.

- Consider the use of other non-opioid analgesic adjuncts (e.g. gabapentin, ketamine or lidocaine) for opioid-sparing effects.

- **After surgery (post-operatively), the surgeon or hospitalist and attending physician should:**

  - Continue pre-operative opioids, with extra analgesia for acute pain via patient-controlled analgesia (PCA) while hospitalized.

  - Use care when transitioning from PCA to oral opioids. DO NOT perform a "straight" conversion from intravenous to oral opioids because of a lack of complete cross-tolerance.

  - Expect the worker to need more time than other patients to stabilize pain control after transitioning to oral opioids.

  - Do not prescribe long-acting or extended-release opioids for post-operative pain unless the worker was previously maintained on these drugs.

  - Avoid new sedative-hypnotics and benzodiazepines.

  - Taper total opioids to pre-operative dose or lower by 6 weeks, unless extenuating circumstances exist. Provide documentation to justify continued use of opioids at higher than pre-operative doses for up to 12 weeks.

  - For appropriate post-operative pain management of workers on high dose opioids or who have co-morbid mental health or substance use disorder, consider consultation with an addiction or pain medicine specialist.

*Rationale***:**

These recommendations are based on the available guidelines addressing pre-, peri-, and post-operative management of patients on chronic opioid treatment. They balance the need for pain control with the desire to decrease adverse effects and prevent post-operative

dose escalation.

10. OPIOID USE IN CATASTROPHIC INJURIES

Catastrophic injuries such as severe burns, crush or spinal cord injury in which significant recovery of physical function is not expected are exempt from many of the recommendations in this guideline. For example, clinically meaningful functional improvement may not occur following catastrophic injury.

Catastrophic injuries in which significant recovery of physical function is not expected are exempt from the criteria in this Guideline.

For catastrophic injuries, chronic opioid treatment may be appropriate when the prescriber has documented all the following:

- A current signed treatment agreement (See Section 3.3.2, Patient Treatment Agreement and Informed Consent)
- Stable opioid dose at or below 80 mg/day MED
- When opioid dose is above 80 mg/day MED, a consultation with a pain specialist before further dose escalation
- Worker has no absolute contraindication to the use of opioids
- No evidence of serious adverse outcomes from opioid use
- No aberrant behavior identified through CURES or urine drug screening. (See Section 3.3.4, Use of CURES to Ensure Safe and Effective Opioid Use, and Section 3.3.6, Use of Urine Drug Testing [UDT] for Initiation and Monitoring of Chronic Opioid Treatment)

Rationale:

Adequate pain control helps the healing and recovery process and is of primary concern following catastrophic injuries. This need should be balanced with practices aimed at minimizing adverse effects of unmitigated long-term opioid use.

11. RESPONSIBLE STORAGE AND DISPOSAL OF OPIOID MEDICATIONS

Patients should be counseled regarding responsible storage and disposal of opioid medications at the initial visit and reminded at every visit.

Patients should be given the following specific advice:

1. Securely store the medications in bottles with child-resistant lids
2. Do not share the medications with others
3. Keep all opioid medications in a single location where a pet, child, teenage, or visitor would not easily have access
4. Fold used fentanyl skin patches in half and then dispose of them safely
5. Properly dispose of the medications when the pain has resolved
    a. Take all of the medication out of its container
    b. Put the medication in a sealable container, such as a plastic bag or coffee can
    c. Mix the medication with an undesirable substance such as cat litter or used coffee grounds. **Do not** crush pills, tablets, or capsules.
    d. Seal the container and be sure to put it in the trash, not in recycling bins
    e. Remove the label or completely cross out any personal information before putting an empty container in the recycling bin or trash. This will help protect your identity.
    f. If you have questions about disposing of your medicine, ask your doctor, pharmacist, or call 1-888-INFO-FDA (1-888-463-6332)

Rationale:

Any medication can be extremely harmful when taken by someone other than the patient. It is essential that patients and caregivers be aware of safe storage and disposal methods.

APPENDICES

A. Brief, Validated Tools

A1. Tools to Screen for and Monitor High-Risk Patients

- Opioid Risk Tool (ORT)
- Cut down, Annoyed, Guilty, Eye-opener (CAGE-AID)
- Two-ITEM Conjoint Screen (TICS)
- Patient Health Questionnaire (PHQ)

A2. Tools for Tracking Pain and Function: Pain Interference Scales

a. Pain Numeric Rating Scale

b. The PEG[11] three-item scale

c. Graded Chronic Pain Scale

d. Brief Pain Inventory

B. Sample of a Written Opioid Treatment Agreement

C. Guidance on Conducting and Interpreting Urine Drug Testing (UDT)

D. Select Black Box Warnings

[11] PEG = Selected items assess average pain intensity (P), interference with enjoyment of life (E), and interference with general activity (G).

E. Dosing Studies Table

F. Opioid Dose Calculations

F1. Dosing Thresholds for Selected Opioids

F2. Equianalgesic Dose Table for Converting Opioid Doses

F3. Morphine Equivalent Dose (MED) Calculation

G. Chart: Summary of Screening Recommendations

Acronyms

Appendix A. Brief, Validated Tools

A1. Tools to Screen for and Monitor High-Risk Patients

a. Opioid Risk Tool (ORT)

b. Cut down, Annoyed, Guilty, Eye-opener (CAGE-AID)

c. Two-ITEM Conjoint Survey (TICS)

d. Patient Health Questionnaire (PHQ)

A2. Tools for Tracking Pain and Function: Pain Interference Scales

a. Pain Numeric Rating Scale

b. The PEG[12] Three-Item Scale (Short Survey)

c. Graded Chronic Pain Scale (GCPS) (Longer Survey)

d. Brief Pain Inventory (BPI)

[12] PEG = Selected items assess average pain intensity (P), interference with enjoyment of life (E), and interference with general activity (G).

Tools to Screen for and Monitor High-Risk Patients

Appendix A1a. Opioid Risk Tool (ORT)[13]

Date _____

Patient Name _____

OPIOID RISK TOOL©

		Mark each box that applies	Item Score If Female	Item Score If Male
1. Family History of Substance Abuse	Alcohol	[ ]	1	3
	Illegal Drugs	[ ]	2	3
	Prescription Drugs	[ ]	4	4
2. Personal History of Substance Abuse	Alcohol	[ ]	3	3
	Illegal Drugs	[ ]	4	4
	Prescription Drugs	[ ]	5	5
3. Age (Mark box if 16–45)		[ ]	1	1
4. History of Preadolescent Sexual Abuse		[ ]	3	0
5. Psychological Disease	Attention Deficit Disorder, Obsessive Compulsive Disorder, Bipolar, Schizophrenia	[ ]	2	2
	Depression	[ ]	1	1
TOTAL		[ ]		

Total Score Risk Category Low Risk 0–3 Moderate Risk 4–7 HighRisk ≥ 8

[13] Source: Webster LR, Webster R. Predicting aberrant behaviors in Opioid-treated patients: preliminary validation of the Opioid risk tool. Pain Med. 2005;6(6):432

Appendix A1b. CAGE-AID Questionnaire[14]

Patient Name _____ Date of Visit _____

When thinking about drug use, include illegal drug use and the use of prescription drug other than prescribed.

Questions:	**YES**	**NO**
1. Have you ever felt that you ought 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 had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover?	□	□

Scoring
Regard one or more positive responses to the CAGE-AID as a positive screen.

Psychometric Properties

The CAGE-AID exhibited:	**Sensitivity**	**Specificity**
One or more **Yes** responses	0.79	0.77
Two or more **Yes** responses	0.70	0.85

(Brown 1995)

[14] To access this tool, visit http://www.integration.samhsa.gov/images/res/CAGEAID.pdf. Used with permission.

Appendix A1c. Two-Item Conjoint Screen (TICS) for Alcohol and Other Drug Problems[15]

1. In the last year, have you ever drunk or used drugs more than you meant to?

2. Have you felt you wanted or needed to cut down on your drinking or drug use in the last year?

Scoring and interpretation

One or more affirmative responses indicates a need for more in-depth assessment.

[15] Source: http://www.mirecc.va.gov/visn22/TICS.pdf. Used by permission. (Brown 2001)

Appendix A1d. Patient Health Questionnaire-PHQ-9*

1. Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
a. Little interest or pleasure in doing things	0	1	2	3
b. Feeling down, depressed, or hopeless	0	1	2	3
c. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
d. Feeling tired or having little energy	0	1	2	3
e. Poor appetite or overeating	0	1	2	3
f. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
g. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
h. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
i. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING *0* **+_____+_____+ _____**

=Total Score: ___

(continued)

2. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficulty
☐	☐	☐	

How to Score PHQ-9

Scoring Method for Diagnosis

Major Depressive Syndrome is suggested if:

- Of the 9 items, 5 or more are circled as at least "More than half the days
- Either item 1a or 1b is positive, that is, at least "More than half the days"

Scoring Method for Planning and Monitoring Treatment

Minor Depressive Syndrome is suggested if:

- Of the 9 items, b, c, or d are circled as at least "More than half the days
- Either item 1a or 1b is positive, that is, at least "More than half the days"

Question One

- To score the first question, tally each response by the number value of each response:

  Not at all = 0

  Several days = 1

  More than half the days = 2

  Nearly every day = 3

- Add the numbers together to total the score.

Question Two

In question two the patient responses can be one of four: not difficult at all, somewhat difficult, very difficult, extremely difficult. The last two responses suggest that the patient's functionality is impaired. After treatment begins, the functional status is again

measured to see if the patient is improving.

- Add the numbers together to total the score.
- Interpret the score by using the guide listed below

Score	Action
≤4	The score suggests the patient may not need depression treatment.
> 5-14	Physician uses clinical judgment about treatment, based on patient's duration of symptoms and
≥15	Warrants treatment for depression, using antidepressant, psychotherapy and/or a

*PHQ-9 developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

Source: http://www.agencymeddirectors.wa.gov/Files/depressionform.pdf (WA AMDG 2010)

Appendix A2a. Pain Numeric Rating Scale[16]

1. On a scale of 0 to 10, with 0 being no pain at all and 10 being the worst pain imaginable, how would you rate your pain RIGHT NOW.

0	1	2	3	4	5	6	7	8	9	10
No Pain										Worst Pain Imaginable

2. On the same scale, how would you rate your USUAL level of pain during the last week.

0	1	2	3	4	5	6	7	8	9	10
No Pain										Worst Pain Imaginable

3. On the same scale, how would you rate your BEST level of pain during the last week.

0	1	2	3	4	5	6	7	8	9	10
No Pain										Worst Pain Imaginable

4. On the same scale, how would you rate your WORST level of pain during the last week.

No Pain										Worst Pain Imaginable

[16] Source: http://www.va.gov/PAINMANAGEMENT/docs/PainNRS.pdf

Appendix A2b. The PEG[17] Three-Item Scale (Short Survey)[18]

1. What number best describes your pain on average in the past week:

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

2. What number best describes how, during the past week, pain has interfered with your enjoyment of life?

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

3. What number best describes how, during the past week, pain has interfered with your general activity?

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

[17] PEG = Selected items assess average pain intensity (P), interference with enjoyment of life (E), and interference with general activity (G).

[18] Source: Krebs EE, Lorenz KA, et al, Development and Initial Validation of the PEG, a Three-item Scale Assessing Pain Intensity and Interference. Journal of General Internal Medicine. 2009; 24(6):733-38.

Appendix A2c. Graded Chronic Pain Scale (GCPS) (Longer Survey)[19]

1. How would you rate your facial pain on a 0 to 10 scale at the present time, that is right now, where 0 is “no pain” and 10 is “pain as bad as could be”?

No pain										Pain as bad as could be
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

2. In the past six months, how intense was your worst pain, rated on a 0 to 10 scale where 0 is “no pain” and 10 is “pain as bad as could be”?

No pain										Pain as bad as could be
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

3. In the past six months, on the average, how intense was your pain rated on a 0-10 scale where 0 is “no pain” and 10 is “pain as bad as could be”? (That is you usual pain at times you were experiencing pain).)

No pain										Pain as bad as could be
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

4. In the past six months, how much has facial pain interfered with your daily activities rated on a 0 to 10 scale where 0 is “no interference’ and 10 is “unable to carry on any activities”?

No interference										Unable to carry on any activities
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

5. In the past six months, how much has facial pain changed your ability to take part in recreational, social and family activities where 0 is “no change” and 10 is “extreme change”?

No change										Extreme change
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

(continued)

[19] Source: Von Korff M, Ormel J, Keefe FJ et al. Grading the severity of chronic pain. Pain 1992; 50:133-149. Used with permission.

6. In the past six months, how much has facial pain changed your ability to work (including housework) where 0 is “no change” and 10 is “extreme change”?

No change										Extreme change
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

7. About how many days in the last six months have you been kept from your usual activities (work, school or housework) because of facial pain?

_____
Days

Appendix A2c. Grading Chronic Pain Severity (*continued*)

Scoring Criteria for Grading Chronic Pain Severity

Characteristic Pain Intensity is a 0 to 100 score derived from Questions 1 through 3:
Mean (Pain Right Now, Worst Pain, Average Pain) X 10
Disability Score is a 0 to 100 score derived from Questions 4 through 6:
Mean (Daily Activities, Social Activities, Work Activities) X 10
Disability Points: Add the indicated points for Disability Days (Question 7) and for Disability Score.

Disability Points

Disability Days (0-180 Days)	Disability Score (0-100)	
0-6 Days 0 Points	0-29	0 Points
7-14 Days 1 Point	30-49	1 Point
15-30 Days 2 Points	50-69	2 Points
31+ Days 3 Points	70+	3 Points

Classification

Grade 0	No TMD pain in prior 6 months
Grade 1	
Low Intensity	Characteristic Pain Intensity< 50
Low Disability	< 3 Disability Point
Grade II	
High Intensity	Characteristic Pain Intensity > 50
Low Disability	< 3 Disability Points
Grade III	
High Disability	3 to 4 Disability Points
Moderately Limiting	(Regardless of Characteristic Pain Intensity)
Grade IV	
High Disability	5 to 6 Disability Points
Severely Limiting	(Regardless of Characteristic Pain Intensity)

Von Korff M, Ormel J, Keefe FJ et al. Grading the severity of chronic pain.
Pain 1992; 50:133-149

Appendix A2d: Brief Pain Inventory

STUDY ID #:__________ DO NOT WRITE ABOVE THIS LINE HOSPITAL #: __________

Brief Pain Inventory (Short Form)

Date: ____/____/____ Time: _______

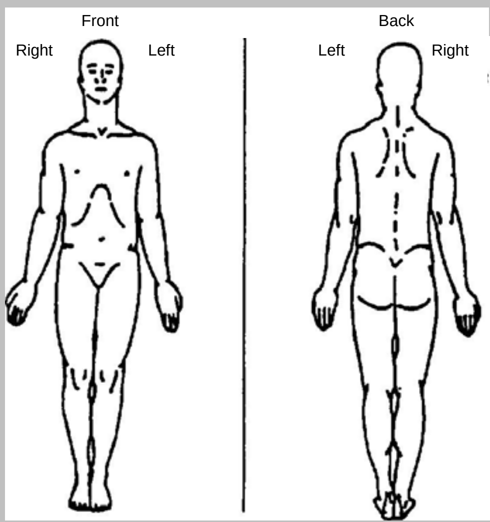
Name: ________________ ________________ ______________

Last First Middle Initial

1. Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these every-day kinds of pain today?

   1. Yes 2. No

2. On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3. Please rate your pain by circling the one number that best describes your pain at its worst in the last 24 hours.

   0 1 2 3 4 5 6 7 8 9 10
   No Pain — Pain as bad as you can imagine

4. Please rate your pain by circling the one number that best describes your pain at its least in the last 24 hours.

   0 1 2 3 4 5 6 7 8 9 10
   No Pain — Pain as bad as you can imagine

5. Please rate your pain by circling the one number that best describes your pain on the average.

   0 1 2 3 4 5 6 7 8 9 10
   No Pain — Pain as bad as you can imagine

6. Please rate your pain by circling the one number that tells how much pain you have right now.

   0 1 2 3 4 5 6 7 8 9 10
   No Pain — Pain as bad as you can imagine

Appendix A2d (continued)

STUDY ID #:_ _ _ _ _ _ _ _ _ _ DO NOT WRITE ABOVE THIS LINE HOSPITAL #: _ _ _ _ _ _ _ _ _ _

Date: _ _ _ _/ _ _ _ _ / _ _ _ _ Time: _ _ _ _ _ _ _ _

Name: _

Last First Middle Initial

7. What treatments or medications are you receiving for your pain?

8. In the last 24 hours, how much relief have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
No Relief — Complete Relief

9. Circle the one number that describes how, during the past 24 hours, pain has interfered with your:

A. General Activity

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

B. Mood

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

C. Walking Ability

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

D. Normal Work (includes both work outside the home and housework)

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

E. Relations with other people

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

F. Sleep

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

G. Enjoyment of life

0 1 2 3 4 5 6 7 8 9 10
Does not Interfere — Completely Interferes

Page 2 of 2

Appendix B: Written Opioid Treatment Agreement (Sample)

OPIOID TREATMENT AGREEMENT

Patient Name (Print): _____

Phone Number where I may be reached within 24 hours: _____

Prescriber Name (Print): _____

Medical Condition requiring Opioid: _____

Planned Opioid Medication: _____

Name and phone of pharmacist: _____

I (patient) understand the following (initial each):

_____ I understand this agreement applies to opioid medications. Common examples include, but are not limited to: oxycodone (e.g., Percocet), hydrocodone (e.g., Vicodin), hydromorphone (Dilaudid), morphine, fentanyl (e.g., Actiq), codeine (e.g., Tylenol with codeine), methadone, tramadol (e.g., Ultram), and buprenorphine (Suboxone).

_____ I understand that opioids are prescribed to see if they increase my function, including my ability to work, perform household chores, or otherwise regain activities.

_____ I understand that opioids are only one part of my treatment program.

_____ I understand that opioids may slightly reduce pain levels. Opioids will **not** eliminate chronic pain and are unlikely to produce major improvements in pain.

_____ I understand that opioid medications have all of the following reported adverse effects (see Table 1). Many, but not all of these risks increase with higher doses.

_____ I have had an opportunity to discuss these risks with my prescriber. I accept these risks.

Table 1. Adverse Opioid Effects by Organ System

System	Example(s) of Effect
Circulatory	Heart attack or sudden death
	Fainting on standing up
	Sudden death due to abnormal heart rhythm

Digestive	Nausea
	Constipation, bowel obstruction
	Stomach pain
Endocrine	Impotence or reduced sex drive, erectile dysfunction, and feminization in men
	Abnormal menstrual periods and infertility in women
	Osteoporosis, reduced muscle mass, reduced strength
	Fatigue, low blood pressure, electrolyte changes
Immune	If cancer is present, spread of tumor may hasten death
	Allergic reactions to medication: Rash, shortness of breath, itchy skin, edema
Nerves/ Psychiatric	Addiction
	Tolerance, requiring higher doses to achieve same effect of pain reduction
	Increased pain sensitivity
	Drowsiness , slower reaction time, unsafe operation of machinery, motor vehicle crashes
	Headache
	Outbursts, inappropriate behavior, violence, reduced impulse control
	Alterations in executive function, emotional response
	Reduced pleasure in eating, weight loss
	Problems thinking clearly, mistaken judgment, changed interactions with other people
	Depression, altered mood, suicidal thoughts
	Brain damage: slight to severe impairments if an overdose occurs
	Seizures
	Overdose, death
Reproductive	Birth defects, miscarriage
	Opioid withdrawal symptoms in newborn babies of mothers on opioids

Respiratory	Reduced ability to breath during sleep; could lead to death
	New or increased problems with obstructive sleep apnea; daytime sleepiness
	Pneumonia
	Worsening asthma and chronic obstructive pulmonary disease (COPD)
Urinary	Urinary retention
General	Reduced sense of balance, falls, fractures
	Physical dependence (defined below)

_____ Opioids will be initially prescribed to me on a trial basis. The primary goal of this treatment is to improve my ability to perform various functions, including return to work, household chores or other physical or mental activities. If significant demonstrable improvement in my functional capabilities does not result from this trial, my prescriber will likely end the trial.

Goal for improved function: _____

_____ Opioids may also be prescribed to make my pain more tolerable, but these medications may not cause the pain to disappear entirely.

_____ Drowsiness and slowed reflexes may be temporary or ongoing adverse effect of opioids, especially during dosage adjustments. If I am experiencing drowsiness while taking opioids, I agree not to drive a vehicle or perform other tasks that could involve danger to myself, family members, coworkers, or others.

_____ Increased motor vehicle crashes have been reported in many studies among those taking opioids on a chronic basis. Especially for this reason, workers performing safety sensitive jobs are frequently precluded by their employers from performing those jobs while taking opioids. If I am employed in a safety sensitive job, I will check with my employer to make sure this medication does not prevent me from working.

_____ Using opioids to treat chronic pain will result in the development of a **physical dependence** on this medication, and sudden decreases or discontinuation of the medication will lead to symptoms of opioid withdrawal. **Symptoms of withdrawal** may include nervousness, anxiety, difficulty sleeping, runny nose, yawning, large pupils, goose bumps, abdominal pain and cramping, diarrhea, vomiting, irritability, aches, and flu-like symptoms. I understand that symptoms of opioid withdrawal are uncomfortable but not physically life threatening. Withdrawal can be extremely difficult and last a long time.

_____ In order to reduce the severity of withdrawal symptoms, opioids may need to be slowly reduced, or tapered, to a lower dose under the direction of the prescriber.

_____ There is a risk that opioid addiction may occur. This most commonly occurs in, but is not limited to, patients with a personal or family history of other drug or alcohol abuse. If my prescriber of opioids believes I may be developing addiction, I should expect that I will be taken off opioids.

I agree to the following (initial each):

Written Opioid Treatment Agreement

_____ I agree to take the medication, _____(name) as prescribed. If problems arise, including adverse effects, I agree to promptly notify my prescriber.

_____ I agree to obtain opioids from **one** designated licensed prescriber.

_____ I understand that refills may be prescribed at in-person appointments (not over the phone, through the mail or by calling the pharmacist), depending on my doctor's evaluation. Refills are not guaranteed.

_____ I agree to obtain opioids from **<u>one</u>** designated licensed pharmacist or pharmacy. I agree to notify my provider immediately if I change pharmacies.

_____ By signing this agreement, I give consent to this provider to talk with the pharmacist, listed above, and to provide him/her with a copy of this agreement.

_____ I agree to take the following non-opioid medication(s) as prescribed for treatment of pain:

_____

_____ I agree to **<u>not</u>** take more opioid medication than prescribed. I agree to **<u>not</u>** take doses of opioids more frequently than prescribed.

_____ I agree to have a working phone number where clinic staff can reach me within 24 hours. I agree to update the clinic anytime I move or change my phone number.

_____ I agree to let my other health care providers know that I am taking these pain medications and that I have a pain management agreement.

_____ I agree to attend and fully participate in all appointments, treatments, examinations, and consultations of my pain treatment which may be requested by my prescriber at any time.

_____ I agree to attend and fully participate in a regular exercise program if required. My specific exercise program is:_____.

_____ I agree to participate in fear avoidance belief training and/or cognitive behavior therapy, if prescribed.

_____ I will participate fully in any psychiatric or psychological assessments, if required.

_____ I agree to keep my scheduled appointments and/or cancel my appointment a minimum of 24 hours prior to the appointment.

_____ I understand that lack of improvements in function or a later loss of those functional benefit(s) are reasons for my prescriber to discontinue opioid medications.

_____ I agree that in the event of an emergency potentially requiring pain medication, I will notify the emergency room or other treatment facility of this agreement. I will ask that my designated prescriber be contacted and discuss the problem with the emergency room or other treating provider. I agree that no more than three (3) days of medications may be prescribed by the emergency room or other provider without this provider's approval. If a situation arises in which I have no alternative but to obtain my necessary prescription from another prescriber (e.g., out of the country), I will then immediately advise my prescriber that I obtained a prescription from another prescriber.

_____ I agree to keep the opioid medication in a safe and secure place. I will keep all medications from children.

Written Opioid Treatment Agreement

_____ I understand that lost, damaged, or stolen medication will **not** be replaced.

_____ I agree to immediately report stolen opioid medication(s) to the police. My provider will also produce a police report if requested to do so.

_____ I agree not to share, sell, or in any way provide my medication to **any** other person.

_____ I agree to not use **any** other mood-modifying drugs, including alcohol (and marijuana regardless of its legal status in my state), unless agreed to by my prescriber. The moderate use of nicotine and caffeine are exceptions to this restriction.

_____ I agree to not use sedating over-the-counter medications, including diphenhydramine (e.g., Benadryl).

_____ Prior to taking any medication that has a warning label stating that it causes drowsiness or sleepiness , I agree to discuss the medication with my prescriber. This includes, but is not limited to, prescription drugs such as alprazolam (brand name Xanax, among others), valium (brand name Valium, among others), and triazolam (brand names Halcion, Rilamir)

_____ I agree to submit to unscheduled urine, blood, or saliva drug testing at my prescriber's request, to verify my compliance with the prescribed medication regimen.

_____ I agree that an abnormal urine, blood, or saliva test will likely result in an end to the treatment with opioids. This includes a finding of a substance not expected (e.g., marijuana and/or illicit drugs).

_____ I understand that, if applicable, my prescriber may check the California Controlled Substance Utilization Review and Evaluation System (CURES) at any time to check my compliance with the treatment plan.

_____ I agree to be seen by a specialist, such as a pain or addiction specialist, if requested by my provider.

_____ I hereby agree that my provider has the authority to discuss my pain and opioid management with other health care professionals and my family members and/or significant others when it is deemed medically necessary in the provider's judgment. I agree to involve family and/or significant others in periodic assessments of my progress.

I have read this document. I understand it and have had all my questions answered satisfactorily. I consent to the use of opioids to improve my daily functioning through controlling my pain. I understand that my treatment with opioids will be carried out as described above. I understand that ANY deviation(s) from the above agreement are grounds for my prescriber to stop prescribing opioids at any time.

_____ _____

Patient Signature Date

_____ _____

Prescriber Signature Date

This Opioid Treatment Agreement is adapted from ACOEM's Occupational Medicine Practice Guidelines, 3rd edition, Copyright © 2008–2014 by Reed Group, Ltd. Adapted with permission from Reed Group, Ltd., www.disabilityguidelines.com. All other rights reserved. Additional sources include the Southern Oregon Opioid Prescribing Guidelines, 2013 and the Washington State Agency Medical Director's Group (AMDG) Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain, 2010.

Appendix C: Guidance on Conducting and Interpreting Urine Drug Testing (UDT)

The following information is Recommendation 3 (R03) from the Canadian Guideline for Safe and Effective Use of Opioids for CNCP, which can be found at http://nationalpaincentre.mcmaster.ca/documents/opioid_guideline_part_b_v5_6.pdf. *(Canada 2010)*

R03 When using urine drug screening (UDS) to establish a baseline measure of risk or to monitor compliance, be aware of benefits and limitations, appropriate test ordering and interpretation, and have a plan to use results. (Grade C).

In the context of using opioids for treating CNCP, UDS can be used to as a tool for: 1) setting a baseline measure of substance use that may help assess risk for addiction, and 2) ongoing monitoring of the patient's compliance with opioids prescribed. However, opinions regarding UDS utility vary.

1. Types of Urine Drug Screening (UDS[20])

1.1 Point-of-care Testing

For point-of-care (POC) testing, the urine sample is collected and tested at the physician's office/clinic.

- POC test kits are available for purchase; urine dipsticks are required.
- Results are immediate, but it tends to be less sensitive and specific than laboratory tests.

1.2 Laboratory Testing

For laboratory testing, the urine sample is collected at physician's office/clinic and sent to a laboratory for testing.

There are two types of laboratory tests: immunoassay and chromatography:

- Province health plans vary in funding UDS; some provide immunoassays for classes of drugs (opioids, cocaine, benzodiazepines, cannabis) or one single drug at a time (e.g., oxycodone, methadone)
- Immunoassay detects drugs for a longer time than chromatography (5–7 days

[20] Please note that within the appendix, the term urine drug screening (UDS) is used in place of urine drug testing (UDT). The two are synonyms.

compared to 1–2 days) but does not distinguish between different types of opioids and often misses semi-synthetic or synthetic opioids such as oxycodone or meperidine.
- Chromatography is more expensive and requires specification of the drug(s) to be identified e.g., oxycodone, morphine, codeine, hydromorphone (alternatively can indicate: "full screen" or "broad spectrum screen").

2. Clinical Usefulness of UDS

2.2 Baseline Measure of Risk

UDS can be helpful in establishing the reliability of a patient's reported substance use. Some clinicians believe that UDS should be used routinely to establish baseline information regardless how well the patient is known to the prescriber. They believe a universal approach will eventually "de-stigmatize" UDS and increase prescriber confidence in using opioids. Other clinicians point out that UDS, whether point-of-care or laboratory-completed, is costly, not available in all parts of Canada, and that routine use adds an unnecessary burden to the system. These clinicians believe that UDS should be used selectively with patients who may be at risk for misuse.

2.2 Monitoring for Compliance

During an opioid trial or after a patient is established on LTOT, UDS can be useful in detecting unauthorized drug use, non-compliance, and diversion (Adams 2001, Brown 2006). There is evidence that urine drug screening reduces substance use in LTOT patients (Manchikanti 2004, Manchikanti 2006.)

There is no compelling evidence to guide physicians on identifying CNCP patients who should have UDS or how often. In deciding whether to order a baseline UDS, and how often to use screening to monitor patients, consider:

2.2.1 patient's risk for opioid misuse and addiction
2.2.2 aberrant drug-related behaviours
2.2.3 availability of UDS.

3. Conducting Urine Drug Screening

3.1 Prior to Ordering the Test

3.1.1 Take a detailed history of the patient's medication use for the preceding 7 days.
3.1.2 Inform patients that the UDS is not meant to "catch" or punish patients but to improve the safety and effectiveness of LTOT.

3.1.3 Tell the patient what results are expected from appropriate opioid use and ask the patient if anything else might show up. (This gives the patient the opportunity to inform the prescriber about changes in their use of the prescribed drug or illicit drug use).
If using a treatment agreement, add the requirement of UDS to the treatment agreement.

3.2 Sample Collection and Preventing Tampering

3.2.1. Sample Dilution

The most common and easiest form of tampering is diluting the urine sample with water. Supervised sample collection makes tampering more difficult, but is a costly use of staff time and patients may find it demeaning. Use supervision if the patient is known to have tampered with a sample.

3.2.2 Sample Temperature

The temperature of the sample can be used to detect tampering because water added to a sample usually varies from body temperature. Temperature-test strips can be used, but they are costly, and must be read within minutes because the sample cools rapidly.

3.2.3. Creatinine Level

A urine creatinine of less than 2–3 mmol/liter is non-physiologic and suggests dilution. Most laboratories can test creatinine level.

4. Interpreting Unexpected Results of UDS

UDS can assist clinical decision-making but should not be considered definitive. Two examples illustrate this: 1) a patient who is diverting prescribed opioids might take a small amount of the prescribed drug so the UDS will be positive; 2) for cocaine there is a relatively short window of detection, so binge cocaine use could be missed.

The table on the following page reviews some common unexpected results and provides a range of possible reasons and some potential actions. In some cases the physician may find it useful to review unexpected results with the laboratory or a physician experienced in interpreting UDS. Prescribers who are unfamiliar with using UDS should take steps to increase knowledge and skill by seeking out an appropriate educational resource or observership.

Appendix C Guidance on Conducting and Interpreting UDT

Interpreting Unexpected Results of Urine Drug Screens (Table B-3-1 in source document, Canada 2010)

	Unexpected Result	Possible Explanations	Actions for the Physician
1	UDS *negative* for prescribed opioid.	• False negative. • Non-compliance. • Diversion.	• Repeat test using chromatography; specify the drug of interest (e.g. oxycodone often missed by immunoassay). • Take a detailed history of the patient's medication use for the preceding 7 days (e.g., could learn that patient ran out several days prior to test) • Ask patient if they've given the drug to others. • Monitor compliance with pill counts.
2	UDS *positive* for non-prescribed opioid or benzodiazepines .	• False positive. • Patient acquired opioids from other sources (double-doctoring, "street").	• Repeat UDS regularly. • Ask the patient if they accessed opioids from other sources. • Assess for opioid misuse/addiction. • Review/revise treatment agreement
3	UDS *positive* for illicit drugs (e.g., cocaine, cannabis).	• False positive. • Patient is occasional user or addicted to the illicit drug. • Cannabis is positive for patients taking dronabinol (Marinol®), THC:CBD Sativex®) or using medical marijuana.	• Repeat UDS regularly. • Assess for abuse/addiction and refer for addiction treatment as appropriate • Ask about medical prescription of dronabinol, THC:CBD or medical marijuana access program.
4	Urine creatinine is lower than 2-3 mmol/liter.	• Patient added water to sample.	• Repeat UDS • Consider supervised collection or temperature testing • Take a detailed history of the patient's medication use for the preceding 7 days • Review/revise treatment agreement.

5	Urine sample is cold.	• Delay in handling sample (urine cools within minutes). • Patient added water to sample.	• Repeat UDS, consider supervised collection or temperature testing • Take a detailed history of the patient's medication use for the preceding 7 days • Review/revise treatment agreement.

The following tables are from Appendix B of the Canadian Guideline for Safe and Effective Use of Opioids for CNCP, which can be found at http://nationalpaincentre.mcmaster.ca/documents/opioid_guideline_part_b_v5_6.pdf. *(Canada 2010)*

Urine Drug Screening (UDS) (Appendix B-3 in source document, Canada 2010)

Immunoassay versus Chromatography for Detection of Opioid Use

(Table B Appendix 3.1 in source document, Canada 2010)

Immunoassay	Chromatography
Does not distinguish between various opioids	Differentiates: codeine, morphine, oxycodone, hydrocodone, hydromorphone, heroin
Will show false positives: Poppy seeds, quinolone antibiotics.	Does not react to poppy seeds.
Often misses semi-synthetic and synthetic opioids, e.g., oxycodone, methadone, fentanyl.	More accurate for semi-synthetic and synthetic opioids.

Detection Times for Immunoassay and Chromatography

(Table B Appendix 3.2 in source document, Canada 2010)

	Number of days drug is detectable	
Drug	**Immunoassay**	**Chromatography**
Benzodiazepines (regular use)	• 20+ days for regular diazepam use. • Immunoassay does not distinguish different benzodiazepines. • Intermediate-acting benzodiazepines such as clonazepam are often undetected.	Not usually used for benzodiazepines.
Cannabis	20+	Not used for cannabis.
Cocaine + metabolite	3–7	1–2
Codeine	2–5	1–2 (Codeine metabolized to morphine.)
Hydrocodone	2–5	1–2
Hydromorphone	2–5	1–2
Meperidine	1 (often missed)	1
Morphine	2–5	1–2: Morphine can be metabolized to hydromorphone
Oxycodone	Often missed	1–2

Source: Adapted from Brands 1998

The following chart is from the Appendix of the Canadian Guideline for Safe and Effective Use of Opioids for CNCP, which can be found in its entirety at http://nationalpaincentre.mcmaster.ca/documents/opioid_guideline_part_b_v5_6.pdf. *(Canada 2010)*

Example of Documenting Opioid Therapy

(Appendix B-7 in source document, Canada 2010)

Opioid Therapy Record Example

Date:	Jan 13 2008	Mar 23 2008	May 23 2008	
Opioid type	Oxycodone	Oxycodone		
Opioid dose	20 tid	30 tid		
MEQ dose	90 mg	135		
Pain worst	8 →	6		
Pain least	3	3		
Pain average	6	5		
Pain right now	6 →	4		
BPI functional	Sleep improved	Back to work		
Adverse effects	Nausea	Nausea continue		
Medical complication	nil	nil		
Compliance	UDS clear	No concerns		
Action	Increase to 30 tid	Keep this dose		
Other Comments				

Appendix D. Select Black Box Warnings:

Important Safety Information on Long-acting Opioids[21]

Fentanyl
Methadone
Morphine Long-Acting Products:
- Avinza
- Kadian
- MS Contin
- Oramorph SR

Oxycodone

Other Long-Acting Products:
- Oxymorphone
- Buprenorphine

[21] Sources: https://www.ncbi.nlm.nih.gov/books/NBK62343/ and http://www.lni.wa.gov/ClaimsIns/Files/OMD/20120109MethadoneHealthAdvisory.pdf (Oramorph)

FENTANYL

FOR USE IN OPIOID-TOLERANT PATIENTS ONLY

DURAGESIC contains a high concentration of a potent Schedule II opioid agonist, fentanyl. Schedule II opioid substances which include fentanyl, hydromorphone, methadone, morphine, oxycodone, and oxymorphone have the highest potential for abuse and associated risk of fatal overdose due to respiratory depression. Fentanyl can be abused and is subject to criminal diversion. The high content of fentanyl in the patches (DURAGESIC) may be a particular target for abuse and diversion.

DURAGESIC is indicated for management of <u>persistent</u>, moderate to severe chronic pain that:

• requires continuous, around-the-clock opioid administration for an extended period of time,

• and cannot be managed by other means such as non-steroidal analgesics, opioid combination products, or immediate-release opioids

DURAGESIC should ONLY be used in patients who are already receiving opioid therapy, who have demonstrated opioid tolerance, and who require a total daily dose at least equivalent to DURAGESIC 25 mcg/h. Patients who are considered opioid-tolerant are those who have been taking, for a week or longer, at least 60 mg of morphine daily, or at least 30 mg of oral oxycodone daily, or at least 8 mg of oral hydromorphone daily or an equianalgesic dose of another opioid.

Because serious or life-threatening hypoventilation could occur, <u>DURAGESIC (fentanyl transdermal system) is contraindicated:</u>

<u>•</u> in patients who are not opioid-tolerant

• in the management of acute pain or in patients who require opioid analgesia for a short period of time

• in the management of post-operative pain, including use after out-patient or day surgeries (e.g., tonsillectomies)

• in the management of mild pain

• in the management of intermittent pain (e.g., use on an as needed basis [prn]) **(See CONTRAINDICATIONS for further information.)**

Since the peak fentanyl concentrations generally occur between 20 and 72 hours of treatment; prescribers should be aware that serious or life threatening hypoventilation may occur, even in opioid-tolerant patients, during the initial application period.

The concomitant use of DURAGESIC with all cytochrome P450 3A4 inhibitors (such as ritonavir, ketoconazole, itraconazole, troleandomycin, clarithromycin, nelfinavir, nefazodone, amiodarone, amprenavir, aprepitant, diltiazem, erythromycin, fluconazole, fosamprenavir, grapefruit juice, and verapamil) may result in an increase in fentanyl plasma concentrations, which could increase or prolong adverse drug effects and may cause potentially fatal respiratory depression. Patients receiving DURAGESIC and any CYP3A4 inhibitor should be carefully monitored for an extended period of time and dosage adjustments should be made if warranted (see CLINICAL PHARMACOLOGY – Drug Interactions, WARNINGS, PRECAUTIONS, and DOSAGE AND ADMINISTRATION for further information).

The safety of DURAGESIC has not been established in children under 2 years of age. DURAGESIC should be administered to children only if they are opioid-tolerant and 2 years of age or older (see PRECAUTIONS Pediatric Use).

DURAGESIC is ONLY for use in patients who are already tolerant to opioid therapy of comparable potency. Use in non-opioid tolerant patients may lead to fatal respiratory depression. Overestimating the DURAGESIC dose when converting patients from another opioid medication can result in fatal overdose with the first dose (see DOSAGE And ADMINISTRATON – Initial DURAGESIC Dose Selection). Due to the mean half-life of approximately 20-27 hours, patients who are thought to have had a serious adverse event, including overdose, will require monitoring and treatment for at least 24 hours.

DURAGESIC can be abused in a manner similar to other opioid agonists, legal or illicit. This risk should be considered when administering, prescribing, or dispensing DURAGESIC in situations where the healthcare professional is concerned about increased risk of misuse, abuse, or diversion.

Persons at increased risk for opioid abuse include those with a personal or family history of substance abuse (including drug or alcohol abuse or addiction) or mental illness (e.g., major depression). Patients should be assessed for their clinical risks for opioid abuse or addiction prior to being prescribed opioids. All patients receiving opioids should be routinely monitored for signs of misuse, abuse, and addiction. Patients at increased risk of opioid abuse may still be appropriately treated with modified-release opioid formulations; however, these patients will require intensive monitoring for signs of misuse, abuse, or addiction.

DURAGESIC patches are intended for transdermal use (on intact skin) only. Do not use a DURAGESIC patch if the pouch seal is broken or the patch is cut, damaged, or changed in any way.

Avoid exposing the DURAGESIC application site and surrounding area to direct external heat sources, such as heating pads or electric blankets, heat or tanning lamps, saunas, hot tubs, and heated water beds, while wearing the system. Avoid taking hot baths or sunbathing. There is a potential for temperature-dependent increases in fentanyl released from the system resulting in possible overdose and

death. Patients wearing DURAGESIC systems who develop fever or increased core body temperature due to strenuous exertion should be monitored for opioid side effects and the DURAGESIC dose should be adjusted if necessary.

METHADONE

Deaths, cardiac and respiratory, have been reported during initiation and conversion of pain patients to methadone treatment from treatment with other opioid agonists. It is critical to understand the pharmacokinetics of methadone when converting patients from other opioids (see DOSAGE AND ADMINISTRATION). Particular vigilance is necessary during treatment initiation, during conversion from one opioid to another, and during dose titration.

Respiratory depression is the chief hazard associated with methadone hydrochloride administration. Methadone's peak respiratory depressant effects typically occur later, and persist longer than its peak analgesic effects, particularly in the early dosing period. These characteristics can contribute to cases of iatrogenic overdose, particularly during treatment initiation and dose titration.

In addition, cases of QT interval prolongation and serious arrhythmia (torsades de pointes) have been observed during treatment with methadone. Most cases involve patients being treated for pain with large, multiple daily doses of methadone, although cases have been reported in patients receiving doses commonly used for maintenance treatment of opioid addiction.

Methadone treatment for analgesic therapy in patients with acute or chronic pain should only be initiated if the potential analgesic or palliative care benefit of treatment with methadone is considered and outweighs the risks.

MORPHINE LONG-ACTING PRODUCTS: Avinza

AVINZA capsules are a modified-release formulation of morphine sulfate indicated for once daily administration for the relief of moderate to severe pain requiring continuous, around-the-clock opioid therapy for an extended period of time.

AVINZA CAPSULESARE TO BE SWALLOWED WHOLE OR THE CONTENTS OF THE CAPSULES SPRINKLED ON APPLESAUCE. THE CAPSULE BEADS ARE NOT TO BE CHEWED, CRUSHED, OR DISSOLVED DUE TO THE RISK OF RAPID RELEASE AND ABSORPTION OF A POTENTIALLY FATAL DOSE OF MORPHINE.

PATIENTS MUST NOT CONSUME ALCOHOLIC BEVERAGES WHILE ONAVINZA THERAPY. ADDITIONALLY, PATIENTS MUST NOT USEPRESCRIPTION OR NON-PRESCRIPTION MEDICATIONS CONTAININGALCOHOL WHILE ON AVINZA THERAPY. CONSUMPTION OF ALCOHOLWHILE TAKING AVINZA MAY RESULT IN THE RAPID RELEASE AND ABSORPTION OF A POTENTIALLY FATAL DOSE OF MORPHINE.

MORPHINE LONG-ACTING PRODUCTS: Kadian

KADIAN contains morphine sulfate, an opioid agonist and a Schedule II controlled substance, with an abuse liability similar to other opioid analgesics. KADIAN can be abused in a manner similar to other opioid agonists, legal or illicit. This should be considered when prescribing or dispensing KADIAN in situations where the physician or pharmacist is concerned about an increased risk of misuse, abuse or diversion.

KADIAN capsules are an extended-release oral formulation of morphine sulfate indicated for the management of moderate to severe pain when a continuous, around-the-clock opioid analgesic is needed for an extended period of time.

KADIAN capsules are NOT for use as a prn analgesic.

KADIAN 100 mg and 200 mg Capsules ARE FOR USE IN OPIOID PATIENTS ONLY. Ingestion of these capsules or of the pellets within the capsules may cause fatal respiratory depression when administered to patients not already tolerant to high doses of opioids. KADIAN CAPSULES ARE TO BE SWALLOWED WHOLE OR THE CONTENTS OF THE CAPSULES SPRINKLED ON APPLE SAUCE. THE PELLETS IN THE CAPSULES ARE NOT TO BE CHEWED, CRUSHED, OR DISSOLVED DUE TO THE RISK OF RAPID RELEASE AND ABSORPTION OF A POTENTIALLY FATAL DOSE OF MORPHINE.

MORPHINE LONG-ACTING PRODUCTS: MS Contin

MS CONTIN contains morphine sulfate, an opioid agonist and a Schedule II controlled substance, with an abuse liability similar to other opioid analgesics.

Morphine can be abused in a manner similar to other opioid agonists, legal or illicit. This should be considered when prescribing or dispensing MS CONTIN in situations where the physician or pharmacist is concerned about an increased risk of misuse, abuse, or diversion.

MS CONTIN Tablets are a controlled-release oral formulation of morphine sulfate indicated for the management of moderate to severe pain when a

continuous, around-the clock opioid analgesic is needed for an extended period of time.

MS CONTIN Tablets are NOT intended for use as a prn analgesic.

MS CONTIN 100 and 200 mg Tablets ARE FOR USE IN OPIOID-TOLERANT PATIENTS ONLY. These tablet strengths may cause fatal respiratory depression when administered to patients not previously exposed to opioids.

MS CONTIN TABLETS ARE TO BE SWALLOWED WHOLE AND ARE NOT TO BE BROKEN, CHEWED, DISSOLVED, OR CRUSHED. TAKING BROKEN, CHEWED, DISSOLVED, OR CRUSHED MS CONTIN TABLETS LEADS TO RAPID RELEASE AND ABSORPTION OF A POTENTIALLY FATAL DOSE OF MORPHINE.

MORPHINE LONG-ACTING PRODUCTS: Oramorph SR

Oramorph SR (morphine sulfate) Sustained Release Tablets are indicated for the relief of pain in adult patients who require opioid analgesics for more than a few days.

Oramorph SR is a sustained release dosage form. Patients must be instructed to swallow the tablet whole; the tablet should not be broken in half, nor should it be crushed or chewed.

The sustained release of morphine from Oramorph SR should be taken into consideration in the event of adverse reactions or overdosage. Serious adverse reactions caused by morphine, which can be fatal, include **respiratory depression, circulatory depression, apnea, shock, and cardiac arrest.**

Oramorph SR should be used with extreme caution in any patient who may have decreased respiratory reserve. Respiratory depression is the chief hazard of all morphine preparations. Oramorph SR is contraindicated in patients with respiratory depression in the absence of resuscitative equipment, in patients with acute or severe bronchial asthma and in patients with known hypersensitivity to morphine.

Oramorph SR is also contraindicated in any patient who has or is suspected of having a paralytic ileus.

Morphine sulfate is a Schedule II controlled substance. Morphine is the most commonly cited prototype for narcotic substances that possess an addiction-forming or addiction-sustaining liability. A patient may be at risk for developing dependence to morphine if used improperly or for overly long periods of time. Oramorph SR should be used with caution in individuals with a prior history of substance abuse or dependence.

Oramorph SR should be used with extreme caution in patients with increased intracranial pressure or those with a head injury.

The clearance of morphine or its metabolites may be reduced in patients with hepatic or renal dysfunction. Pharmacodynamic changes in these patients should be considered when adjusting the dose and dosing intervals.

The depressant effects of morphine are potentiated by the presence of other CNS depressants such as alcohol, sedatives, antihistamines, or psychotropic drugs. Opioid receptor agonist/antagonist analgesics should NOT be administered to patients who have received or are receiving a course of therapy with a pure opioid agonist analgesic.

There has been no systematic evaluation of Oramorph SR as an initial opioid analgesic in the management of pain. Because it may be more difficult to titrate a patient using a sustained-release morphine, it is ordinarily advisable to begin treatment using an immediate release formulation.

OXYCODONE

IMPORTANCE OF PROPER PATIENT SELECTION AND POTENTIAL FOR ABUSE

OxyContin® contains oxycodone which is an opioid agonist and a Schedule II controlled substance with an abuse liability similar to morphine.

OxyContin® can be abused in a manner similar to other opioid agonists, legal or illicit. This should be considered when prescribing or dispensing OxyContin® in situations where the physician or pharmacist is concerned about an increased risk of misuse, abuse, or diversion.

OxyContin® is a controlled-release oral formulation of oxycodone hydrochloride indicated for the management of moderate to severe pain when a continuous, around-the-clock opioid analgesic is needed for an extended period of time. OxyContin® is not intended for use on an as-needed basis.

Patients considered opioid tolerant are those who are taking at least 60 mg oral morphine/day, 25 mcg transdermal fentanyl/hour, 30 mg oral oxycodone/day, 8 mg oral hydromorphone/day, 25 mg oral oxymorphone/day, or an equianalgesic dose of another opioid for one week or longer. OxyContin® 60 mg and 80 mg tablets, a single dose greater than 40 mg, or a total daily dose greater than 80 mg are only for use in opioid-tolerant patients, as they may cause fatal respiratory depression when administered to patients who are not tolerant to the respiratory-depressant or sedating effects of opioids. Persons at increased risk for opioid abuse include those with a personal or family history of substance abuse (including drug or alcohol abuse or addiction) or mental illness (e.g., major depression). Patients should be assessed for their clinical risks for opioid abuse or addiction prior to being prescribed opioids. All patients receiving opioids

should be routinely monitored for signs of misuse, abuse and addiction.

OxyContin® must be swallowed whole and must not be cut, broken, chewed, crushed, or dissolved. Taking cut, broken, chewed, crushed or dissolved OxyContin tablets leads to rapid release and absorption of a potentially fatal dose of oxycodone.

The concomitant use of OxyContin® with all cytochrome P450 3A4 inhibitors such as macrolide antibiotics (e.g., erythromycin), azole-antifungal agents (e.g., ketoconazole), and protease inhibitors (e.g., ritonavir) may result in an increase in oxycodone plasma concentrations, which could increase or prolong adverse effects and may cause potentially fatal respiratory depression. Patients receiving OxyContin® and a CYP3A4 inhibitor should be carefully monitored for an extended period of time and dosage adjustments should be made if warranted.

OTHER LONG-ACTING OPIOID PRODUCTS

Oxymorphone

POTENTIAL FOR ABUSE, IMPORTANCE OF PROPER PATIENT SELECTION AND LIMITATIONS OF USE

Potential for Abuse

OPANA ER® contains oxymorphone, which is a morphine-like opioid agonist and a Schedule II controlled substance, with an abuse liability similar to other opioid analgesics.

Oxymorphone can be abused in a manner similar to other opioid agonists, legal or illicit. This should be considered when prescribing or dispensing OPANA ER® in situations where the physician or pharmacist is concerned about an increased risk of misuse, abuse, or diversion.

Proper Patient Selection

OPANA ER® is an extended-release oral formulation of oxymorphone indicated for the management of moderate to severe pain when a continuous, around-the-clock opioid analgesic is needed for an extended period of time.

Limitations of Use

OPANA ER® is NOT intended for use as an as needed analgesic.

OPANA ER® TABLETS are to be swallowed whole and are not to be broken, chewed, dissolved, or crushed. Taking broken, chewed, dissolved, or crushed OPANA ER® TABLETS leads to rapid release and absorption of a potentially fatal dose of oxymorphone.

Patients must not consume alcoholic beverages, or prescription or non-prescription medications containing alcohol, while on OPANA ER® therapy. The co-ingestion of alcohol with OPANA ER® may result in increased plasma levels and a potentially fatal overdose of oxymorphone.

Buprenorphine

POTENTIAL FOR ABUSE and IMPORTANCE OF PROPER PATIENT SELECTION, POTENTIAL FOR ABUSE, AND LIMITATIONS OF USE

Proper Patient Selection Butrans™ is a transdermal formulation of buprenorphine indicated for the management of moderate to severe chronic pain in patients requiring a continuous, around-the-clock opioid analgesic for an extended period of time.

Potential for Abuse Butrans™ contains buprenorphine which is a mu opioid partial agonist and a Schedule III controlled substance. Butrans™ can be abused in a manner similar to other opioid agonists, legal or illicit. Consider the abuse potential when prescribing or dispensing Butrans™ in situations where the physician or pharmacist is concerned about an increased risk of misuse, abuse, or diversion.

Persons at increased risk for opioid abuse include those with a personal or family history of substance abuse (including drug or alcohol abuse or addiction) or mental illness (e.g., major depression). Assess patients for their clinical risks for opioid abuse or addiction prior to being prescribed opioids. Routinely monitor all patients receiving opioids for signs of misuse, abuse and addiction.

Limitations of Use Do not exceed a dose of one 20 mcg/hour Butrans™ system due to the risk of QTc interval prolongation. Avoid exposing the Butrans application site and surrounding area to direct external heat sources. Temperature-dependent increases in buprenorphine release from the system may result in overdose and death.

Appendix E. Opioid Dose and Risk of Morbidity and Mortality

	Population, N	Health effect measured	Risk measure (95% confidence interval)	Dose range at which risk observed	Other risks observed
Dunn et al. 2010	9940 patients treated with opioids for chronic noncancer pain followed for a mean 42 months (range < 1 to 119 months)	Opioid-related overdose events	(Hazard ratio for overdose events)		Patients receiving sedative-hypnotics concurrently at increased risk
			8.87 (3.99–19.72)	>100 mg/day MED	
			3.73 (1.47–9.50)	50-<100 mg/day MED	
			1.44 (0.57–3.62)	20-<50 mg/day MED	
			1.0 (Reference)	1–20 mg/ day MED	
Bohnert et al. 2011	155,434 VA patients who received opioids for pain followed for up to 4 years	Opioid-related mortality	(Hazard ratio for mortality)		0.04% overall risk of opioid overdose
			1.9 (1.33-2.67)	20-50mg/day MED	
			4.6 (3.18-6.74)	50-100 mg/day MED	
			7.18 (4.85-10.65)	> 100 mg/day MED	
			1 (Reference)	20 mg/ day MED	
Gomes et al. 2011	607,156 patients treated with opioids for noncancer pain	Opioid-related mortality	(Odds Ratio for mortality)		"Attenuated but significant risk" for doses 50–199mg/day MED
			1.3 (0.94-1.84)	20-49 mg/day MED	
			1.92 (1.30-2.85)	50-99 mg/day MED	
			2.04 (1.28-3.24)	100-199 mg/day MED	
			2.88 (1.79-4.63)	>200 mg/day MED	

Appendix F. Opioid Dose Calculations

F1. Dosing Thresholds for Selected Opioids

F2. Equianalgesic Dose Table for Converting Opioid Doses

F3. Morphine Equivalent Dose (MED) Calculation

Appendix F1. Dosing Thresholds for Selected Opioids

Opioid	Recommended conversion dose threshold (not equianalgesic)	Recommended starting dose for opioid-naïve patients	Considerations
Codeine	533 mg per 24 hours	30mg q 4–6 hours	See individual product labeling for maximum dosing of combination products. Avoid concurrent use of any OTC products containing same ingredient. See acetaminophen warning , on the next page.
Fentanyl Transdermal	33 mcg/hour (q 72 hr)		Use only in opioid tolerant patients who have been taking ≥ 60mg MED daily for a week or longer
Hydrocodone	80 mg per 24 hours	5-10mg q 4–6 hours	See individual product labeling for maximum dosing of combination products. Avoid concurrent use of any OTC products containing same ingredient. See acetaminophen warning , on the next page.
Hydromorphone	20 mg per 24 hours	2 mg q 4–6 hours	
Methadone	11 mg per 24 hours	2.5-5 mg BID – TID	Methadone is difficult to titrate due to its half-life variability. It may take a long time to reach a stable level in the body. Methadone dose should not be increased more frequently than every 7 days. Do not use as PRN or combine with other long-acting (LA) opioids.
Morphine	80 mg per 24 hours	Immediate-release: 10 mg q 4 hours Sustained-release: 15 mg q 12 hours	Adjust dose for renal impairment.
Oxycodone	53 mg per 24 hours	Immediate-release: 5 mg q 4–6 hours	See individual product labeling for maximum dosing of combination products. Avoid concurrent use of any OTC products containing same ingredient. See acetaminophen warning on the next page.
Oxymorphone	27 mg per 24 hours	Immediate-release: 5–10 mg q 4–6 hours Sustained Release: 10 mg q 12 hours	**Use with extreme caution due to potential fatal interaction with alcohol or medications containing alcohol.**

(continued)

Acetaminophen warning with combination products

Hepatotoxicity can result from prolonged use or doses in excess of recommended maximum total daily dose of acetaminophen including over-the-counter products.

Short-term use (<10 days) – 4000 mg/day

Long-term use – 2500mg/day

Key considerations in dosing long acting opioids

Monitoring for adequate analgesia and use of "rescue" medications (at least until the long-acting opioid dose is stabilized). All new dosage calculations should include consideration for concurrent utilization of short-acting opioids.

If the patient is more debilitated, frail and/or has significant metabolic impairments (e.g. renal or hepatic dysfunction), consider starting at the lower end of the conversion dose range.

Always monitor for adverse effects (nausea, constipation, oversedation, itching, etc.)

Adapted for California with permission from Washington State Agency Medical Directors Group Interagency (AMDG) Guideline on Opioid Dosing for Chronic Non-cancer Pain, 2010. (WA AMDG 2010)

Appendix F2. Equianalgesic Dose Table for Converting Opioid Doses[22]

All conversions between opioids are estimates generally based on equianalgesic dosing" or ED. Patient variability in response to these EDs can be large, due primarily to genetic factors and incomplete cross-tolerance. **It is recommended that, after calculating the appropriate conversion dose, it be reduced by 25–50% to assure patient safety**.	
Opioid	**Approximate Equianalgesic Dose (oral & transdermal)** *
Morphine (reference)	**30mg**
Codeine	200mg
Fentanyl transdermal	12.5mcg/hr
Hydrocodone	30mg
Hydromorphone	7.5mg
Methadone	Chronic: 4mg†
Oxycodone	20mg
Oxymorphone	10mg

*Adapted from VA 2003 & FDA labeling

†Equianalgesic dosing ratios between methadone and other opioids are complex, thus requiring slow, cautious conversion (Ayonrinde 2000)

[22] From the Washington State Agency Medical Directors Group Interagency (AMDG) Guideline on Opioid Dosing for Chronic Non-cancer Pain, 2010. (WA AMDG 2010). Used with permission

Appendix F3. Morphine Equivalent Dose (MED) Calculation[23]

For patients taking more than one opioid, the morphine equivalent doses of the different opioids must be added together to determine the cumulative dose (see the table in Appendix F1 for MEDs of selected medications). For example, if a patient takes six hydrocodone 5mg / acetaminophen 500mg and two 20mg oxycodone extended release tablets per day, the cumulative dose may be calculated as follows:

1) Hydrocodone 5mg x 6 tablets per day = 30mg per day.
2) Using the Equianalgesic Dose table in Appendix F2, 30mg Hydrocodone = 30mg morphine equivalents.
3) Oxycodone 20mg x 2 tablets per day = 40mg per day.
4) Per Equianalgesic Dose table, 20mg oxycodone = 30mg morphine so 40mg oxycodone = 60mg morphine equivalents.
5) Cumulative dose is 30mg + 60mg = 90mg morphine equivalents per day.

Electronic opioid dose calculators are available at: http://www.agencymeddirectors.wa.gov/Files/DosingCalc.xls

[23] Source: Washington State Agency Medical Directors Group Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain, 2010. Used with permission.

Appendix G. Summary of Screening and Monitoring Recommendations

Screening and Monitoring for Safe Opioid Prescribing								
		Acute Pain (1st month after onset of pain)		**Subacute Pain (1–3 months)**		**Chronic Pain (> 3 months)**		
	Pre-Operatively in workers on Chronic Opioid Treatment	Prior to First Opioid Prescription	Week 4	Just Prior to Opioid Trial	Opioid Trial	Titration	Maintenance	Any Unscheduled Visit for Opioids (E.R.)
						Chronic Opioid Treatment		
Check CURES	✓ Every visit							
Use Screening Tools to Identify High-Risk Patients				✓				
Use Screening Tools to Identify Current Misuse/Abuse of Opioids				✓	As needed	As needed		
Administer UDT at POC			✓	✓	As needed	Randomly 2-4 times/year for all patients; quarterly for patients on > 80 mgMED		✓
Treatment Agreement				✓	Modify agreement as needed			
Track Pain and Function	✓Every visit				✓Establish baseline	Monthly during first year	Quarterly after first year	
Determine Current MED Dose	✓Every visit							

* Using validated screening tools (ORT or SOAPP-R, PHQ-9, and CAGE-AID or TICS
† Using validated screening tools (POM or COMM)
‡ Using an online dose calculator such as http://www.agencymeddirectors.wa.gov/Files/DosingCalc.xls

Table adapted with permission from Washington State Agency Medical Directors Group Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain, 2010.

ACRONYMS

BTP	break-through pain
CAGE-AID	Cut down, Annoyed, Guilty, Eye-opener-Adapted to Include Drugs
CNS	central nervous system
COMM	Current Opioid Misuse Measure
COPD	chronic obstructive pulmonary disease
CURES	Controlled Substance Utilization Review and Evaluation System
DSM-V	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
DWC	Division of Workers' Compensation
ECG	electrocardiogram
GC/MS	gas chromatography/mass spectrometry
GCPS	Graded Chronic Pain Scale
LC/MS	liquid chromatography/mass spectrometry
MED	morphine equivalent dose
MTUS	Medical Treatment Utilization Schedule
NSAID	nonsteroidal anti-inflammatory drug
ORT	Opioid Risk Tool
PCA	patient-controlled analgesia
PDMP	Prescription Drug Monitoring Program
PEG	Average pain intensity (P), interference with enjoyment of life (E), and interference with general activity (G).

PHQ-9	Patient Health Questionnaire, ninth edition
PMQ	Patient Medication Questionnaire
POC	point of collection
POMI	Prescription Opioid Misuse Index
PTSD	post-traumatic stress disorder
RCT	randomized controlled trial
SIMP	structured intensive multidisciplinary program
SOAPP-R	Screener and Opioid Assessment for Patients with Pain-Revised
TICS	Two-item Conjoint Screen
UDS	urine drug screen (same as urine drug test
UDT	urine drug test (same as urine drug screen)
WHYMPI	West Haven-Yale Multidimensional Pain Inventory