Chronic Pain Management for non-Cancer Patients

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Objectives

- Non-pharmacologic and non-opioid medication treatments
- Evidence on efficacy of opioids
- Indications and contraindications to opioid prescribing
- Standardized approach to the chronic pain patient
- Individualize treatment with opioids
- Prescribe chronic opioids safely
Chronic non-Cancer Pain—Scope of the Problem

- **15%** prevalence in US

- **1 in 4** patients in primary care settings report persistent pain that interferes with function

- **Up to 60%** of patients report chronic persistent LBP 5 years after initial presentation

- In U.S., only **4** Board Certified pain specialists for every **100,000** patients with chronic pain

Approaches to Chronic Pain Management

- Non-Pharmacologic Treatments
- Non-controlled Drugs Used in Chronic Pain
- Role of Opiates in Chronic Pain
Non-Pharmacologic Treatments

- Physical therapy and conditioning
- Acupuncture (esp. osteoarthritis and fibromyalgia)
- Heat, Cold
- Massage therapy
- Cognitive-Behavioral Therapy
- Biofeedback/Relaxation training
- Operant-behavioral therapy
- Pain management groups, family therapy
- Complementary and Alternative Medicine supplements

Cognitive-Behavioral Therapy

- Cognitions and behaviors affect pain experience
- Coping skills training
- 8-10 small group or individual sessions
- RCT evidence for LBP, OA and RA

Keefe FJ. Clin Psychol. 1996.
Multidisciplinary Pain Rehabilitation

~50% reductions in
- pain
- opioid use
- surgeries
- hospitalizations
- patients on disability

Turk DC in Pain Treatment Centers at a Crossroads: A Practical and Conceptual Reappraisal, Progress in Pain Research and Management 1996.
Chronic Disease Management in Primary Care

- Randomized trial of collaborative care model vs usual care
- Improved pain intensity, depression, and pain-related disability
- Though improvements were modest

Dobscha SK et al. JAMA 2009.
Approaches to Chronic Pain Management

- Non-Pharmacologic Treatments
- Non-controlled Drugs Used in Chronic Pain
- Role of Opiates in Chronic Pain
Non-Controlled Drugs Used in Chronic Pain

Screen for depression

- RCT of 12 months optimized antidepressant therapy and pain self-management in primary care patients with depression and musculoskeletal pain
  - 50% reduction in baseline depression severity
  - Statistically significant improvements in pain severity, anxiety and quality of life

Kroenke K. JAMA 2009.
Non-Controlled Drugs Used in Chronic Pain

- Acetaminophen, NSAIDs
- Adjuvants
  
  *have a primary indication other than analgesia, but have analgesic properties*

- TCAs
- Other antidepressants
- Anticonvulsants
- Muscle relaxants
- Sleep aids, anxiolytics
- Vitamin D
- Topical preparations (anesthetics, aromatics)
NSAIDs

- Alone for mild to moderate somatic pain
- With low potency opiates for stronger pain
- Analgesic ceiling
- Class effect
- Toxicity (renal, GI, CNS…CV risk of COX-2 inhibitors)
Adjuvant Analgesics

- Escalate dose slowly (in most cases, at weekly intervals), with monitoring
- Discontinue ineffective adjuvants
- Maximize dose of one agent\(^1\) vs. combining adjuvants\(^2\)

\(^1\) OHSU Opioids and Chronic Non-malignant Pain: A Clinicians' Handbook.
Adjuvant Analgesics

TCAs

- Low dose, 10-12 hours before arising
- Amitriptyline best studied, >50mg increased side effects w/o added benefit

Other antidepressants

- SSRIs not as effective
- Bupropion, SNRIs (venlafaxine, duloxetine) may be effective

Anticonvulsants (gabapentin, pregabalin)

- For patients not tolerating TCAs
Muscle Relaxants, Sleep Aids, Anxiolytics

Muscle Relaxants
- Commonly prescribed
- Dependence (should not be stopped abruptly)
- Limited efficacy with significant muscle spasm

Sleep Aids, Anxiolytics
- Improved sleep, anxiety may reduce pain

Caution CNS depression when combined with opioids.
Approaches to Chronic Pain Management

- Non-Pharmacologic Treatments
- Non-controlled Drugs Used in Chronic Pain
- Role of Opiates in Chronic Pain
What role (if any) should chronic opioids play in managing chronic non-cancer pain?

- What are the potential benefits?
- What are the potential risks?
Role of Opiates in Chronic Pain

Potential Benefits
- Analgesia
- Improved function
- Improved QOL

Potential Risks
- Toxicity/side effects
- Functional impairment
- Physical dependence
- Hyperalgesia
- Addiction, other misuse

*from* Parran T. SAMHSA-CSAT: Clinical Challenges in Prescribing Controlled Drugs. 2012.
Evidence for Efficacy of Opioids—RCTs

- Opioids alleviate pain more effectively than other drugs
  - Weaker opioids (tramadol, codeine) ~ NSAIDs and TCAs
  - Trials report large variation, typically 2 to 3 points on a 0 to 10 scale
- Depression scores not improved
- Functional status, QOL generally improved

Furlan A. CMAJ 2006.
Kalso E. Pain 2004.
Evidence RE: Opioid Side Effects—RCTs

- Constipation, nausea, vomiting, dizziness, drowsiness, dry skin/pruritus
- Tolerance to side effects develops (except for constipation)
- No impact on driving performance w/chronic stable dose

Furlan A. CMAJ 2006.
Kalso E. Pain 2004.
Limitations of Opioid RCTs

- >50% Drop-out rate
  - though benefit was observed on Intention-to-Treat analysis
- DX substance abuse or major depression excluded
- 90% funded by pharma
- Study length average only 5 weeks

Furlan A. CMAJ 2006.
Kalso E. Pain 2004.
Evidence for Efficacy of Chronic Opioids

- Long term studies poorly controlled or observational
- Patients observed w/satisfactory analgesia on moderate non-escalating doses ($\leq 195$mg morphine daily), w/improved function and minimal addiction risk

Untoward Effects of Chronic Higher Dose Opioids

Hyperalgesia

- Heightened pain response to noxious stimuli
- Demonstrated in animal studies
- Some patients have ↑ pain at higher opioid doses and improve w/ tapering medication

Untoward Effects of Chronic Higher Dose Opioids

- Suppression of both adrenal and gonadal axes
  - Especially testosterone deficiency

- Altered immune function
  - Opioid receptors demonstrated on immune cells
  - Opioids ↑ immunosuppression in HIV patients
  - …though pain itself can suppress immune function

Opioids—Dependence, Tolerance, Addiction

Physical dependence

- A drug class-specific withdrawal syndrome
- Can be produced by abrupt cessation, rapid dose reduction, decreasing blood level, administration of an antagonist
- *Develops in most patients*

Tolerance

- Exposure to a drug results in a diminution of the drug's effects over time
- May/may not develop

Opioids—Dependence, Tolerance, Addiction

Addiction

- **Behaviors:** impaired control over drug use, compulsive use, continued use despite harm, craving

- *With chronic opioid use, reported as low as 0.3%, but as high as 19%
  - Multiple studies: negligible risk in never-addicted medical patients

Prescription Opioid Misuse

- Prescription painkiller overdoses killed nearly 15,000 people in the US in 2008. This is more than 3 times the 4,000 people killed by these drugs in 1999.

- In 2010, about 12 million Americans (age 12 or older) reported nonmedical use of prescription painkillers in the past year.

http://www.cdc.gov/vitalsigns/PainkillerOverdoses/index.html  Accessed 8/7/12
In 2007, opioids were involved in more overdose deaths than heroin and cocaine combined.
Unintentional drug poisoning exceeds MVA and suicide as leading cause of injury death

Diversion may be a leading factor in these deaths

- Less than half of patients w/ opioid overdose had ever been prescribed these medications\(^1\)
  - 34% Gift; friend/relative got from physician(s)
  - 31% Bought/took from a friend/relative
  - 13% Bought from drug dealer or other stranger
  - 11% Gift; friend/relative got from elsewhere
  - 7% Got from physician(s)
  - 4% Stole from pharmacy/wrote fake prescription/Internet pharmacy\(^2\)

- FDA warning on fentanyl patches after 10 pediatric death from accidental exposure

\(^1\) Hall AJ et al. JAMA 2008.

\(^2\) 2008 National Survey on Drug Use and Health.
Untoward Effects of Chronic Higher Dose Opioids

- Overdose risk and daily dose prescribed\(^1\)
  - 50-100mg/day → 3-fold
  - >100mg/day → 11-fold

\(^1\) Dunn KM. Annals Int Med 2010.
CDC Recommendation

- If a patient’s dosage has increased to $\geq 120$ morphine milligram equivalents per day without substantial improvement in pain and function, seek a consult from a pain specialist.

Would you prescribe long-term opioids?

Mr. Williams is a 62 year old man, new to your practice, working only part time as an electrician for a number of years due to low back pain which worse w/standing and walking

- Pain meds “not working as well anymore”
  - Naproxen 1500mg/day
  - Acetaminophen 2000mg/day
  - Vicodin HP 1-2 tabs TID PRN, #45/month
- Physical examination unremarkable
- MRI last year: spinal stenosis
- Ortho evaluation did not recommend any intervention
- Physical therapy X 2 w/o improvement

- If I prescribe, how can I optimize the benefits?
- If I prescribe, how can I manage the risks?
Treatment Goals in Management of Chronic Pain—the Four A’s

**Analgesia**
- Pain reduction, *not* eradication

**Activities of daily living**
- Work, play, socialization

avoid **Adverse events**
- Side effects, hyperalgesia

avoid **Aberrant drug-related behaviors**
- Addiction, diversion

**Affect**
- Mood, sleep

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Opioid Trial

We lack accurate predictors of

- Who will experience lasting benefit from chronic opioid analgesia

We do have good evidence that a 6 month trial is safe

- Assuming no contraindications
- If not continued past the point of obvious failure

Opioids are rarely sufficient

- Non-pharmacologic treatments
- Adjunctive medications

Adapted from Parran T. SAMHSA-CSAT: Clinical Challenges in Prescribing Controlled Drugs. 2012.
Response to Opioids may be quite variable

- Patients may respond differently to the same opioid
- Pain syndromes may respond differently to the same opioid
- Incomplete cross-tolerance between opioids
### Opioids—Short vs Long Acting

<table>
<thead>
<tr>
<th>Short-acting</th>
<th>Long-acting</th>
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</thead>
<tbody>
<tr>
<td>oxycodone</td>
<td>Slow release delivery system</td>
</tr>
<tr>
<td>hydrocodone</td>
<td>transdermal fentanyl</td>
</tr>
<tr>
<td>hydromorphone</td>
<td>extended release morphine</td>
</tr>
<tr>
<td>morphine</td>
<td>extended release oxycodone</td>
</tr>
</tbody>
</table>

- **Intrinsic pharmacokinetic property**
  - methadone

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Opioids—Short vs. Long Acting

- 38-60% of chronic pain patients treated with opioids are on short acting agents
- Potential problems w/short acting opioids
  - Rate hypothesis
  - Early withdrawal syndrome
- But these proposed benefits for long acting opioids have not been systematically studied.\textsuperscript{2,3}

\textsuperscript{1}Hariharan J et al. JGIM 2007.
\textsuperscript{2}Trescott AM et al. Pain Physician 2006.
Tramadol

- Mixed $\mu$ opioid agonist and SNRI
- Less risk of abuse potential, physical tolerance, and psychological dependence compared with the true opioids
- Associated with seizures in at-risk pts
- When combined with SSRIs, associated with seizures; also with serotonin syndrome
Prescribing Opioids—General Principles

- Short-acting probably safer for initial therapy, w/less risk of inadvertent overdose
- Start low and go slow
- Use fixed-dose regimens
- Opiate PRNs <1/3 of the days each month
  - Increase fixed dose
  - Use non-opiates for breakthrough pain
Aberrant Medication Taking Behavior—Differential Diagnosis

- Self-medication of psychiatric and physical symptoms other than pain
- Addiction
- Criminal intent—diversion
- Pseudo-addiction
Pseudo-addiction

- Intense focus on obtaining relief
- Mimics aspects of addiction, but behavior should resolve with adequate pain relief
- “Drug seeking” or “pain-relief seeking”?

Causes
- disease progression
- opioid resistant pain
- withdrawal mediated pain
- opioid-induced hyperalgesia

Individualizing Opioid Dosing Regimens

- Differences in absorption and metabolism
  - Long-acting opioids may need more frequent dosing
  - Long-acting morphine TID
  - Fentanyl patch q48 hours
  - Only adjust once present dose is at steady state

- Differences in pain pattern
  - Asymmetric dosing
  - Example: Patient who has more pain before Noon
Managing Refractory Pain or Opioid Toxicity—Drug Rotation

- **Titration**—Reduce first opioid by 1/3 each day, while starting second opioid, titrating up over 3 days to target starting dose—which should be at much lower equi-analgesic dose (25-50% lower)

- When sedation occurs—problem of incomplete cross-tolerance due to inter-patient variability
How to Stop Prescribing Opioids to a Patient—Legal Issues

Detoxing opioid addicts w/opioids

vs.

Tapering opioids when no longer appropriate in patients w/legitimate pain diagnosis

Known Risk Factors for Addiction are Good Predictors for Prescription Drug Misuse

- Positive CAGE, f-CAGE
- Lifetime history of substance use disorder
- Family history of substance use disorder
- Heavy tobacco use
- History of severe depression or anxiety
- History of legal problems

Adapted from Alford DP. SAMHSA-CSAT: Clinical Challenges in Prescribing Controlled Drugs. 2012.
Stratifying Risk: Triage Guide

- **Low Risk**—Primary Care
  - No history of substance abuse; minimal risk factors

- **Medium Risk**—Primary Care w/ Specialist Support
  - Past history of substance (but not prescription opioid) abuse

- **High Risk**—Specialty Pain Management
  - Active substance abuse problem; history of prescription opioid abuse
  - [Opioids may not be appropriate]

Urine Drug Testing

Typical assays most useful if positive for non-prescribed medications/illicit drugs

- Immunoassay drug testing, laboratory based (request “Limit of Detection” testing) or
- POC (e.g., “dip-stick” testing)
- These assays were designed to detect toxic levels...not prescribed doses
- And they may detect semi-synthetic (oxycodone) or synthetic (fentanyl) opioids only at very high doses

Confirming therapeutic adherence often requires more sensitive test

- Laboratory-based specific drug identification (e.g., high-performance liquid chromatography [HPLC]) Immunoassay
UDT Monitoring in Patients on Opioids for Chronic Pain

- 21%\(^1\), 46%\(^2\) of patients on opioids in chronic pain clinic had positive urine tox screens in absence of aberrant behavioral issues
- Weak evidence that UDT reduces opioid misuse\(^3\)

UDT Strategies

- Most useful if positive for cocaine
- Random monitoring specified in agreement
- Avoid sending when you can… “If I check your urine right now, will I find anything in it?”
- Keep it open-ended…”Your urine was positive for drugs, what happened??”
- Base frequency of screening on assessment of patient’s risk for misuse
- Combine with pill (patch) counts
- Combine with utilization of Prescription Monitoring Program
Prescription Drug Monitoring Programs

- Operational in 42 states
- National Association of Boards of Pharmacy InterConnect allows users of PDMPs in 11 states (AZ, CT, IN, KA, KY, MI, NM, ND, OH, SC, VA) to securely exchange prescription data.
- In small sample study in MA, PDMP-enrolled providers had 30% drop in #patients with questionable activity (vs. 8% drop for non-participating providers)
Contracts, Agreements

- Recommended,\textsuperscript{1,2} efficacy not well established\textsuperscript{3}
- Shifts paradigm from seemingly arbitrary decisions of individual provider to office/clinic “policy”
- Articulates
  - rationale, intended benefits, potential risks of treatment
  - monitoring and action for aberrant medication-taking behavior

\textsuperscript{1}Fishman SM. J Pain Symp Manag 2002.
Agreements/Contracts should be Goal-Directed

- Individualized
- Finite and clear expectations for patient and clinician
  - One physician, one pharmacy
  - Monitoring
- Goals/targets that are reasonable for patient to attain
  - Increasing daily ambulation
  - Referral to pain program, psychologist

Primary Care Provider Management of Higher Risk Patients

Starrels et al. JGIM 2011.
Prescribers of ER/LA opioid analgesics are strongly encouraged to do all of the following:

- **Train (Educate Yourself)** - a REMS-compliant education program offered by an accredited CME provider
- **Counsel Your Patients** – regarding the safe use, serious risks, storage, and disposal of ER/LA opioid analgesics every time you prescribe these medicines
- **Emphasize Patient and Caregiver Understanding of the Medication Guide** - stress the importance of reading the Medication Guide that they will receive from their pharmacist every time an ER/LA opioid is dispensed to them
- **Consider Using Other Tools** - including Patient-Prescriber Agreement (PPA) and risk assessment instruments
Other Systems Strategies

- Insurer Restrictions (e.g., BCBS of MA)
- State Medical Boards requiring/encouraging pain education for licensure
- State laws requiring referral of patients on high doses of opioids to pain specialists
Opioids are an important treatment option for patients with chronic non-cancer pain. But they pose significant hazard to patients and society.

- They should be considered only as part of a multimodal treatment plan.
- They almost never provide total lasting relief.
- One cannot predict accurately which patients will benefit.
  - ...but one can predict which patients have increased risk for harm.
- So a closely monitored trial may be appropriate in carefully selected patients.
Published Guidelines/Statements from State Medical Boards [accessed 8/6/12]

- American Academy of Pain Medicine
  www.painmed.org/clinical_info/guidelines.html

- American Pain Society
  www.ampainsoc.org/pub/cp_guidelines.htm

- American Academy of Pain Management
  www.aapainmanage.org/literature/Publications.php

- American Geriatrics Society

- Federation of State Medical Boards
  www.fsmb.org/RE/PAIN/resource.html

- FDA Risk Evaluation & Mitigation Strategy
  www.er-la-opioidrems.com/IwgUI/remd/home.action
Methadone

- Long acting, unique lack of euphoria, inexpensive
- *Mu* receptor agonist, NMDA receptor antagonist, SNRI
  - neuropathic pain
  - less opioid-induced tolerance and hyperalgesia
- High inter-individual variability
  - Primarily metabolized by CP450-3A4, expression varies up to 30-fold
  - Absorption, urinary pH, medication interactions, diet, physical condition, age, pregnancy

Methadone

- Biphasic renal elimination
  - $\alpha$-elimination (6-8 hours), analgesic duration
  - $\beta$-elimination (30-60 hours), prevents withdrawal symptoms
- QT prolongation $\Rightarrow$ torsade de pointes
  - In case series\(^1\)
    - higher doses (200mg)
    - known risk factors for arrhythmia, hypokalemia, other medications that prolong QT
  - But not replicated in prospective study\(^2\)

Methadone-related Deaths on the Rise

Methadone-related Deaths—Overdose and Respiratory Depression

Findings of 2003 National Assessment:
1. Accumulation during induction/titration (clinician overestimates tolerance)
2. Misuse/Abuse with high doses
3. Synergism with other CNS depressants

Patient education key: same pill size as oxycodone, yet 5mg methadone 3-4 times as potent as 5mg oxycodone

In Canada, prescribers need an exemption from Health Canada to prescribe methadone for pain.

Accessed 8/6/12.
Dosing Methadone

- **Switching from another opioid**
  - Stop current opioid
  - Start methadone, dividing calculated starting dose into q8 hour doses
  - 5% of total daily dose may be given every 6 hours PRN breakthrough pain
  - Adjust dose only every 5 to 14 days

- **Opioid-naïve patient**
  - 2.5 to 10mg q8 hours
Chronic Pain Management for non-Cancer Patients—References
R Pels, MD, 8/8/12

**General**


**Opioids**


Ackerman SJ et al. Risk of constipation in patients prescribed fentanyl transdermal system or oxycodone hydrochloride controlled-release in a California Medicaid population. Consult Pharm 2004;19:118-132.


**Methadone**


**Vitamin D**


**Screening and Monitoring**


### The DOs and DON'Ts of Extended-Release / Long-Acting Opioid Analgesics

**DO:**
- Read the *Medication Guide*
- Take your medicine exactly as prescribed
- Store your medicine away from children and in a safe place
- Flush unused medicine down the toilet
- Call your healthcare provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

**Call 911 or your local emergency service right away if:**
- You take too much medicine
- You have trouble breathing, or shortness of breath
- A child has taken this medicine

**Talk to your healthcare provider:**
- If the dose you are taking does not control your pain
- About any side effects you may be having
- About all the medicines you take, including over-the-counter medicines, vitamins, and dietary supplements

**DON'T:**
- **Do not** give your medicine to others
- **Do not** take medicine unless it was prescribed for you
- **Do not** stop taking your medicine without talking to your healthcare provider
- **Do not** break, chew, crush, dissolve, or inject your medicine. If you cannot swallow your medicine whole, talk to your healthcare provider.
- **Do not** drink alcohol while taking this medicine

For additional information on your medicine go to: [dailymed.nlm.nih.gov](http://dailymed.nlm.nih.gov)

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### Patient Specific Information

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Take this card with you every time you see your healthcare provider and tell him/her:
- Your complete medical and family history, including any history of substance abuse or mental illness
- The cause, severity, and nature of your pain
- Your treatment goals
- All the medicines you take, including over-the-counter (non-prescription) medicines, vitamins, and dietary supplements
- Any side effects you may be having

**Take your opioid pain medicine exactly as prescribed by your healthcare provider.**
Consent for Chronic Opioid Therapy

A consent form from the American Academy of Pain Medicine

Dr. __________________ is prescribing opioid medicine, sometimes called narcotic analgesics, to me for a diagnosis of ________________________________

This decision was made because my condition is serious or other treatments have not helped my pain.

I am aware that the use of such medicine has certain risks associated with it, including, but not limited to: sleepiness or drowsiness, constipation, nausea, itching, vomiting, dizziness, allergic reaction, slowing of breathing rate, slowing of reflexes or reaction time, physical dependence, tolerance to analgesia, addiction and possibility that the medicine will not provide complete pain relief.

I am aware about the possible risks and benefits of other types of treatments that do not involve the use of opioids. The other treatments discussed included:

________________________________________________________________________________________

I will tell my doctor about all other medicines and treatments that I am receiving.

I will not be involved in any activity that may be dangerous to me or someone else if I feel drowsy or am not thinking clearly. I am aware that even if I do not notice it, my reflexes and reaction time might still be slowed. Such activities include, but are not limited to: using heavy equipment or a motor vehicle, working in unprotected heights or being responsible for another individual who is unable to care for himself or herself.

I am aware that certain other medicines such as nalbuphine (Nubian™), pentazocine (Talwin™), buprenorphine (Buprenex™), and butorphanol (Stadol™), may reverse the action of the medicine I am using for pain control. Taking any of these other medicines while I am taking my pain medicines can cause symptoms like a bad flu, called a withdrawal syndrome. I agree not to take any of these medicines and to tell any other doctors that I am taking an opioid as my pain medicine and cannot take any of the medicines listed above.

I am aware that addiction is defined as the use of a medicine even if it causes harm, having cravings for a drug, feeling the need to use a drug and a decreased quality of life. I am aware that the chance of becoming addicted to my pain medicine is very low. I am aware that the development of addiction has been reported rarely in medical journals and is much more common in a person who has a family or personal history of addiction. I agree to tell my doctor my complete and honest personal drug history and that of my family to the best of my knowledge.

I understand that physical dependence is a normal, expected result of using these medicines for a long time. I understand that physical dependence is not the same as addiction. I am aware physical dependence means that if my pain medicine use is markedly decreased, stopped or reversed by some of the agents mentioned above, I will experience a withdrawal syndrome. This means I may have any or all of the following: runny nose, yawning, large pupils, goose bumps, abdominal pain and cramping, diarrhea, irritability, aches throughout my body and a flu-like feeling. I am aware that opioid withdrawal is uncomfortable but not life threatening.

I am aware that tolerance to analgesia means that I may require more medicine to get the same amount of pain relief. I am aware that tolerance to analgesia does not seem to be a big problem for most patients with chronic pain, however, it has been seen and may occur to me. If it occurs, increasing doses may not always help and may cause unacceptable side effects. Tolerance or failure to respond well to opioids may cause my doctor to choose another form of treatment.

(Males only) I am aware that chronic opioid use has been associated with low testosterone levels in males. This may affect my mood, stamina, sexual desire and physical and sexual performance. I understand that my doctor may check my blood to see if my testosterone level is normal.

(Females Only) If I plan to become pregnant or believe that I have become pregnant while taking this pain medicine, I will immediately call my obstetric doctor and this office to inform them. I am aware that should I carry a baby to delivery while taking these medicines, the baby will be physically dependent upon opioids. I am aware that the use of opioids is not generally associated with a risk of birth defects. However, birth defects can occur whether or not the mother is on medicines and there is always the possibility that my child will have a birth defect while I am taking an opioid.

I have read this form or have it read to me. I understand all of it. I have had a chance to have all of my questions regarding this treatment answered to my satisfaction. By signing this form voluntarily, I give my consent for the treatment of my pain with opioid pain medicines.

Patient signature __________________________ Date ______________

Witness to above ______________________________

Approved by the AAPM Executive Committee on January 14, 1999.

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E-mail aapm@amctec.com
Web site www.painmed.org

Long-term Controlled Substances Therapy for Chronic Pain

SAMPLE AGREEMENT

A consent form from the American Academy of Pain Medicine

The purpose of this agreement is to protect your access to controlled substances and to protect our ability to prescribe for you.

The long-term use of such substances as opioids (narcotic analgesics), benzodiazepine tranquilizers, and barbiturate sedatives is controversial because of uncertainty regarding the extent to which they provide long-term benefit. There is also the risk of an addictive disorder developing or of relapse occurring in a person with a prior addiction. The extent of this risk is not certain.

Because these drugs have potential for abuse or diversion, strict accountability is necessary when use is prolonged. For this reason the following policies are agreed to by you, the patient, as consideration for, and a condition of, the willingness of the physician whose signature appears below to consider the initial and/or continued prescription of controlled substances to treat your chronic pain.

1. All controlled substances must come from the physician whose signature appears below or, during his or her absence, by the covering physician, unless specific authorization is obtained for an exception. (Multiple sources can lead to untoward drug interactions or poor coordination of treatment.)

2. All controlled substances must be obtained at the same pharmacy, where possible. Should the need arise to change pharmacies, our office must be informed. The pharmacy that you have selected is:

   ______________________________________________  phone: __________________________

3. You are expected to inform our office of any new medications or medical conditions, and of any adverse effects you experience from any of the medications that you take.

4. The prescribing physician has permission to discuss all diagnostic and treatment details with dispensing pharmacists or other professionals who provide your health care for purposes of maintaining accountability.

5. You may not share, sell, or otherwise permit others to have access to these medications.

6. These drugs should not be stopped abruptly, as an abstinence syndrome will likely develop.

7. Unannounced urine or serum toxicology screens may be requested, and your cooperation is required. Presence of unauthorized substances may prompt referral for assessment for addictive disorder.
8. Prescriptions and bottles of these medications may be sought by other individuals with chemical dependency and should be closely safeguarded. It is expected that you will take the highest possible degree of care with your medication and prescription. They should not be left where others might see or otherwise have access to them.

9. Original containers of medications should be brought in to each office visit.

10. Since the drugs may be hazardous or lethal to a person who is not tolerant to their effects, especially a child, you must keep them out of reach of such people.

11. Medications may not be replaced if they are lost, get wet, are destroyed, left on an airplane, etc. If your medication has been stolen and you complete a police report regarding the theft, an exception may be made.

12. Early refills will generally not be given.

13. Prescriptions may be issued early if the physician or patient will be out of town when a refill is due. These prescriptions will contain instructions to the pharmacist that they not be filled prior to the appropriate date.

14. If the responsible legal authorities have questions concerning your treatment, as might occur, for example, if you were obtaining medications at several pharmacies, all confidentiality is waived and these authorities may be given full access to our records of controlled substances administration.

15. It is understood that failure to adhere to these policies may result in cessation of therapy with controlled substance prescribing by this physician or referral for further specialty assessment.

16. Renewals are contingent on keeping scheduled appointments. Please do not phone for prescriptions after hours or on weekends.

17. It should be understood that any medical treatment is initially a trial, and that continued prescription is contingent on evidence of benefit.

18. The risks and potential benefits of these therapies are explained elsewhere [and you acknowledge that you have received such explanation].

19. You affirm that you have full right and power to sign and be bound by this agreement, and that you have read, understand, and accept all of its terms.

Physician Signature

Patient Signature

Date

Patient Name (Printed)

Approved by the AAPM Executive Committee on April 2, 2001.

AAPM
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E-mail: aapm@amctec.com
Web site: http://www.painmed.org/

### Using Urea Drug Testing (UDT) to Monitor Opioid Therapy for Chronic Non-Cancer Pain

The purpose of drug testing is to identify aberrant behaviors, undocumented drug use, and verify compliance with treatment. If a patient's medication adherence is poor or not as expected, a second test may be done to confirm the results.

#### Testing for Opioid Class:

<table>
<thead>
<tr>
<th>Opioid</th>
<th>Amount of Use</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naloxone</td>
<td>&lt; 20 mg/day</td>
<td>Daily</td>
</tr>
<tr>
<td>Methadone</td>
<td>&lt; 60 mg/day</td>
<td>Daily</td>
</tr>
<tr>
<td>Codeine</td>
<td>&lt; 60 mg/day</td>
<td>Daily</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>&lt; 150 mg/day</td>
<td>Daily</td>
</tr>
<tr>
<td>Alcohol</td>
<td>&lt; 12 mg/dl</td>
<td>Daily</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Low Risk</td>
<td>Weekly</td>
</tr>
<tr>
<td>Cocaine</td>
<td>Low Risk</td>
<td>Weekly</td>
</tr>
<tr>
<td>Opiates</td>
<td>Low Risk</td>
<td>Weekly</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>Low Risk</td>
<td>Weekly</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>High Risk</td>
<td>Twice a week</td>
</tr>
<tr>
<td>heroin</td>
<td>High Risk</td>
<td>Twice a week</td>
</tr>
</tbody>
</table>

#### Assessing Opioid Therapy

- **Purpose**
  - To monitor therapy compliance
  - To identify aberrant behaviors
  - To verify drug use

- **Steps**
  1. Review medical history
  2. Conduct urine drug test
  3. Evaluate test results

- **Factors to Consider**
  - Concomitant medications
  - History of substance abuse
  - Presence of concomitant psychiatric diseases

- **Conclusion**
  - Therapy compliance is assessed
  - Aberrant behaviors are identified
  - Appropriate interventions are recommended
<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.2</td>
<td>None</td>
<td>3.1, 3.2</td>
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<tr>
<td>1.3</td>
<td>None</td>
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<td>1.4</td>
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</tr>
<tr>
<td>1.5</td>
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<td>3.1, 3.2</td>
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</tbody>
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### Table 1: Main Problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>None</td>
<td>3.1, 3.2</td>
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<tr>
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<td>None</td>
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<tr>
<td>1.3</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.4</td>
<td>None</td>
<td>3.1, 3.2</td>
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<tr>
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</tbody>
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### Table 2: Sub-Problems

<table>
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<tr>
<th>Problem</th>
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</thead>
<tbody>
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<td>1.1</td>
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<td>3.1, 3.2</td>
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<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.3</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.4</td>
<td>None</td>
<td>3.1, 3.2</td>
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<tr>
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<td>3.1, 3.2</td>
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</table>

### Table 3: Specific Solutions

<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1.1</td>
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<td>3.1, 3.2</td>
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<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.3</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.4</td>
<td>None</td>
<td>3.1, 3.2</td>
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<td>3.1, 3.2</td>
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### Table 4: Detailed Solutions

<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1.1</td>
<td>None</td>
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<tr>
<td>1.2</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.3</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.4</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
<tr>
<td>1.5</td>
<td>None</td>
<td>3.1, 3.2</td>
</tr>
</tbody>
</table>
# Pharmacologic Agents Used in the Treatment of Persistent Pain

## Indications and Common Uses

<table>
<thead>
<tr>
<th>Class/Agent</th>
<th>Indication</th>
<th>Common (Off-Label) Use</th>
<th>Level of Evidence</th>
</tr>
</thead>
</table>
| **Analgesics, Paraphenol**  
  Acetaminophen | Treatment of mild to moderate pain | | High-  
  Multiple randomized controlled clinical trials for headache and non-neuropathic pain conditions |
| **Analgesics, Topical**  
  Lidocaine patch 5% | Postherpetic neuralgia | Diabetic neuropathy, osteoarthritis, low back pain | High-  
  Controlled clinical trials for postherpetic neuralgia  
  Moderate-  
  Randomized trial for osteoarthritis; open-label trials for diabetic neuropathy, low back pain |
| **Anticonvulsants**  
  Carbamazepine  
  Gabapentin  
  Lamotrigine  
  Phenytoin  
  Pregabalin | Carbamazepine:  
  Trigeminal neuralgia  
  Gabapentin:  
  Postherpetic neuralgia  
  Pregabalin:  
  Postherpetic neuralgia, diabetic neuropathy | Carbamazepine:  
  Postherpetic neuralgia  
  Gabapentin:  
  Diabetic neuropathy; other forms of neuropathic pain  
  Lamotrigine, phenytoin:  
  Some off-label | High-  
  Multiple controlled clinical trials for gabapentin and pregabalin.  
  Lamotrigine: Diabetic neuropathy as add-on to carbamazepine; trigeminal neuralgia and other neuropathic pain conditions |
| **Antidepressants, Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)**  
  Duloxetine  
  Venlafaxine | Duloxetine: Diabetic peripheral neuropathic pain  
  Venlafaxine: No labeled pain indications | Experimental use for neuropathic pain | Moderate-  
  Duloxetine: Some evidence for diabetic peripheral neuropathy (few studies)  
  Low-  
  Venlafaxine: Equivocal findings for neuropathy and neuralgia (very limited published data) |
| **Antidepressants, Tricyclic**  
  Amitriptyline  
  Amoxapine  
  Desipramine  
  Doxepin  
  Nortriptyline  
  Protriptyline | No indications for pain | Postherpetic neuralgia, phantom limb pain, diabetic neuropathy, trigeminal neuralgia, osteoarthritis, rheumatoid arthritis | High-  
  Multiple randomized controlled clinical trials show efficacy in postherpetic neuralgia, peripheral neuropathy, and other chronic pain syndromes |
<table>
<thead>
<tr>
<th>Category</th>
<th>Example Drug(s)</th>
<th>Conditions</th>
<th>Evidence Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counterirritants, Topicals, Capsaicin</td>
<td></td>
<td>Temporary relief of pain from osteoarthritis, rheumatoid arthritis, postherpetic neuralgia, and diabetic neuropathy</td>
<td>Moderate- Controlled clinical trials with inconsistent findings</td>
</tr>
<tr>
<td>COX-2 Inhibitors*</td>
<td>Celecoxib</td>
<td>Rheumatoid arthritis, osteoarthritis, primary dysmenorrhea</td>
<td>High-</td>
</tr>
<tr>
<td></td>
<td>Rofecoxib†</td>
<td></td>
<td>Multiple controlled clinical trials</td>
</tr>
<tr>
<td></td>
<td>Valdecoxib‡</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle Relaxants, Centrally Acting Baclofen</td>
<td></td>
<td>Orphan drug intrathecally administered. Treatment of intractable spasticity</td>
<td>High-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Several randomized controlled trials with spasticity</td>
</tr>
<tr>
<td>N-methyl-d-aspartate (NMDA) Inhibitors Ketamine</td>
<td></td>
<td>No chronic pain indications</td>
<td>Low-</td>
</tr>
<tr>
<td></td>
<td>Ketamine</td>
<td></td>
<td>Very few trials; topical preparation as yet unproven. Some use for breakthrough pain in chronic pain</td>
</tr>
<tr>
<td>NSAIDs*</td>
<td>Diclofenac, Naproxen</td>
<td>Rheumatoid arthritis, osteoarthritis, primary dysmenorrhea</td>
<td>High-</td>
</tr>
<tr>
<td></td>
<td>Ibuprofen</td>
<td></td>
<td>Multiple randomized, controlled clinical trials for FDA-indicated uses</td>
</tr>
<tr>
<td></td>
<td>Salsalate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opioids, Opioid-like Agents Tramadol</td>
<td></td>
<td>Moderate to moderately severe chronic pain</td>
<td>High-</td>
</tr>
<tr>
<td></td>
<td>Hydromorphone†</td>
<td></td>
<td>Controlled clinical trials for diabetic neuropathy, low back pain, polyneuropathy</td>
</tr>
<tr>
<td></td>
<td>Levorphanol</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Morphine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oxycodone and sustained-release preparations of levorphanol and morphine</td>
<td>Chronic pain</td>
<td>High-</td>
</tr>
<tr>
<td></td>
<td>Oxycodone</td>
<td></td>
<td>Multiple controlled clinical trials: Levorphanol specifically for neuropathic pain, Oxycodone for diabetic neuropathy</td>
</tr>
<tr>
<td>Opioids, Transdermal Fentanyl Transdermal System§</td>
<td></td>
<td>Management of chronic pain in patients requiring continuous opioid analgesia</td>
<td>High-</td>
</tr>
</tbody>
</table>

*COX-2 Inhibitors: Celecoxib, Rofecoxib, Valdecoxib
†Opioids, Oral Hydromorphone, Levorphanol, Morphine, Oxycodone
‡NSAIDs: Diclofenac, Naproxen, Ibuprofen, Salsalate
§Opioids, Transdermal Fentanyl Transdermal System
# Sites/Modes of Action and Safety

<table>
<thead>
<tr>
<th>Class/Agent</th>
<th>Site/Mode of Action</th>
<th>Side Effects/Tolerability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analgesics, Paraphenol</strong>&lt;br&gt;Acetaminophen</td>
<td>Inhibits synthesis of prostaglandins in the central nervous system. Peripherally blocks pain impulse generation</td>
<td>Well tolerated&lt;br&gt;Safety concerns: Renal and/or hepatic dysfunction (may be irreversible) with chronic use</td>
</tr>
<tr>
<td><strong>Analgesics, Topical</strong>&lt;br&gt;Lidocaine patch 5%</td>
<td>Peripherally blocks neuronal permeability to sodium ions preventing depolarization and conduction of impulses</td>
<td>Well tolerated, but may cause rash or skin irritation&lt;br&gt;No safety concerns</td>
</tr>
<tr>
<td><strong>Anticonvulsants</strong>&lt;br&gt;Carbamazepine&lt;br&gt;Gabapentin&lt;br&gt;Lamotrigine&lt;br&gt;Phenytoin&lt;br&gt;Pregabalin</td>
<td>Work centrally. <strong>Gabapentin</strong> and <strong>pregabalin</strong> have specific GABA binding sites; also produce calcium channel blockade. <strong>Carbamazepine</strong> may limit influx of sodium ions across cell membranes, depressing synaptic transmission or decreasing summation of temporal stimulation. <strong>Lamotrigine</strong> and <strong>phenytoin</strong> produce sodium channel blockade. <strong>Lamotrigine</strong> inhibits release of glutamate</td>
<td>Side effects: Drowsiness, dizziness, GI upset, ataxia, nystagmus at high doses&lt;br&gt;Safety concerns: <strong>Gabapentin</strong>: Concerns only in patients treated for epilepsy&lt;br&gt;<strong>Carbamazepine</strong>: Bone marrow suppression/blood dyscrasias, hypersensitivity/anaphylaxis, hepatic dysfunction, SIADH&lt;br&gt;<strong>Lamotrigine</strong>: Stevens-Johnson syndrome</td>
</tr>
<tr>
<td><strong>Antidepressants, Serotonin-norepinephrine Reuptake Inhibitors (SNRIs)</strong>&lt;br&gt;Duloxetine&lt;br&gt;Venlafaxine</td>
<td>Centrally inhibit serotonin-norepinephrine reuptake inhibition. Possible calcium channel blockade</td>
<td>Side effects: Drowsiness, dizziness, GI upset, activation or agitation&lt;br&gt;Safety concerns: Syndrome of inappropriate antidiuretic hormone secretion (SIADH), suicidal ideation</td>
</tr>
<tr>
<td><strong>Antidepressants, Tricyclic</strong>&lt;br&gt;Amitriptyline&lt;br&gt;Amoxapine&lt;br&gt;Desipramine&lt;br&gt;Doxepin&lt;br&gt;Nortriptyline&lt;br&gt;Protriptyline</td>
<td>Work centrally and possibly peripherally. Sodium channel blockade. Inhibition of norepinephrine and serotonin reuptake. Possible calcium channel blockade and central and peripheral alpha-adrenergic effects</td>
<td>Side effects: Drowsiness, dizziness, forgetfulness, constipation, blurred vision, dry mouth, weight gain, sexual dysfunction&lt;br&gt;Safety concerns: Cardiac conduction changes, orthostatic hypotension, serotonin syndrome (with other serotonergic agents)</td>
</tr>
<tr>
<td><strong>Counterirritants, Topicals, Capsaicin</strong></td>
<td>Vanilloid receptor antagonist suppresses spinal cord pain signaling; depletes the neuron of substance P and prevents reaccumulation</td>
<td>Side effects: Burning sensation at site of application&lt;br&gt;Safety concerns: Few, but may cause burning of mucous membranes if applied inadvertently</td>
</tr>
<tr>
<td><strong>COX-2 Inhibitors</strong>&lt;br&gt;Celecoxib&lt;br&gt;Rofecoxib†&lt;br&gt;Valdecoxib‡</td>
<td>Work peripherally by inhibiting COX-2 enzyme, reducing inflammation and pain. Possible central effect on NMDA</td>
<td>Side effects: GI discomfort, drowsiness, increased blood pressure, lower extremity edema&lt;br&gt;Safety concerns: Increased</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular Events</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Muscle Relaxants, Centrally Acting</strong> <strong>Baclofen</strong></td>
<td>Work centrally. GABA-B agonism inhibits pain signaling. Inhibits transmission of reflexes at spinal cord level, possibly by hyperpolarization of primary afferent fiber terminals</td>
<td>Side effects: Drowsiness, dizziness, GI upset, ataxia, cognitive impairment  Safety concerns: Respiratory depression with unintentional overdose</td>
</tr>
<tr>
<td><strong>N-methyl-D-aspartate (NMDA) Inhibitors</strong> <strong>Ketamine</strong></td>
<td>Direct action on the cortex and limbic system of CNS by NMDA inhibition</td>
<td>Side effects: Drowsiness, dizziness, dysphoria, dissociation, hallucinations  Safety concerns: Hypersensitivity</td>
</tr>
<tr>
<td><strong>NSAIDs</strong></td>
<td>Work peripherally on inflammation and pain by inhibition of COX-1/COX-2 enzymes. Some central effects on AMPA and/or NMDA</td>
<td>Side effects: Gastrointestinal discomfort (nausea, cramping, dyspepsia), drowsiness, increased blood pressure, bruising/petechiae, lower extremity edema  Safety concerns: Gastrointestinal ulceration, bleeding/impaired coagulation, renal impairment</td>
</tr>
<tr>
<td><strong>Opioids, Opioid-like Agents</strong> <strong>Tramadol</strong></td>
<td>Work centrally by weak mu opioid receptor agonism and serotonin-norepinephrine reuptake inhibition. Possible sodium, calcium, and/or potassium channel blockade</td>
<td>Side effects: Drowsiness, dizziness, gastrointestinal upset, agitation  Safety concerns: Seizures (usually with overdosage), serotonin syndrome with antidepressants</td>
</tr>
<tr>
<td><strong>Opioids, Oral</strong> <strong>Hydromorphone</strong>† <strong>Morphine</strong> <strong>Oxycodone</strong></td>
<td>Central: Binds to opioid receptors in CNS to inhibit ascending transmission of nociceptive signals; activates midbrain descending pain controls. Peripheral: Binds to opioid receptors on peripheral nerves, decreasing pain signaling</td>
<td>Side effects: Sedation, drowsiness, dizziness, nausea, constipation, itching/hives, urinary hesitancy, sexual dysfunction due to decreased sex hormone levels  Safety concerns: Respiratory depression (rare in ambulatory settings), immune dysfunction via lymphocyte depletion</td>
</tr>
<tr>
<td><strong>Opioids, Transdermal</strong> <strong>Fentanyl Transdermal System§</strong></td>
<td>As for oral opioids</td>
<td>As for oral opioids</td>
</tr>
</tbody>
</table>

*FDA requested labeling for COX-2 agents to include boxed warning highlighting potential increased risk of cardiovascular (CV) events; FDA requested revised labeling for NSAIDs to provide more specific information about potential CV and GI risks.  
†Removed from market in 2005 at FDA request because of safety issues.  
‡Removed from market in 2004 at FDA request because of safety issues.  
§Public health advisory issued July 2005 by FDA regarding the safe use of transdermal fentanyl patches for pain control.
# The nonsteroidal antiinflammatory drugs

<table>
<thead>
<tr>
<th>NSAID</th>
<th>Trade name</th>
<th>Usual dose</th>
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</thead>
<tbody>
<tr>
<td><strong>Carboxylic acids</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspirin (acetylsalicylic acid)</td>
<td>Multiple</td>
<td>2.4-6 g/24h in 4-5 divided doses</td>
</tr>
<tr>
<td>Buffered aspirin</td>
<td>Multiple</td>
<td>Same</td>
</tr>
<tr>
<td>Enteric-coated salicylates</td>
<td>Multiple</td>
<td>Same</td>
</tr>
<tr>
<td>Salsalate</td>
<td>Disalcid</td>
<td>1.5-3.0 g/24h BID</td>
</tr>
<tr>
<td>Diflunisal</td>
<td>Dolobid</td>
<td>0.5-1.5 g/24h BID</td>
</tr>
<tr>
<td>Choline magnesium trisalicylate</td>
<td>Trilisate</td>
<td>1.5-3 g/24h BID-TID</td>
</tr>
<tr>
<td><strong>Proprionic acids</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>Motrin, Rufen, OTC</td>
<td>OTC:200-400 mg QID; Rx: 400-800 mg; max 3200 mg/24h</td>
</tr>
<tr>
<td>Naproxen; Enteric</td>
<td>Naprosyn, Anaprox, OTC: Alleve</td>
<td>250, 375, 500 mg BID; 225 mg BID</td>
</tr>
<tr>
<td>Fenoprofen</td>
<td>Nalfon</td>
<td>300-600 mg QID</td>
</tr>
<tr>
<td>Ketoprofen</td>
<td>Orudis; Oruvail</td>
<td>75 mg TID; q day</td>
</tr>
<tr>
<td>Flurbiprofen</td>
<td>Ansaid</td>
<td>100 mg BID-TID</td>
</tr>
<tr>
<td>Oxaprozin</td>
<td>Daypro</td>
<td>600 mg; 2 tabs per day</td>
</tr>
<tr>
<td><strong>Acetic acid derivatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indomethacin</td>
<td>Indocin, Indocin SR</td>
<td>25, 50 mg TID-QID; SR:75 mg BID; rarely &gt;150 mg/24h</td>
</tr>
<tr>
<td>Tolmetin</td>
<td>Tolectin</td>
<td>400, 600, 800 mg; 800 to 2400 mg/24h</td>
</tr>
<tr>
<td>Sulindac</td>
<td>Clinoril</td>
<td>150, 200 mg BID; some increase to TID</td>
</tr>
<tr>
<td>Diclofenac (plus misoprostol)</td>
<td>Voltaren; Cataflam; (Arthrotec)</td>
<td>50, 75 mg BID (50 mg BID)</td>
</tr>
<tr>
<td>Etodolac</td>
<td>Lodine</td>
<td>200, 300 mg BID-QID; max:1200 mg/24h</td>
</tr>
<tr>
<td><strong>Fenamates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meclofenamate</td>
<td>Meclomen</td>
<td>50-100 mg TID-QID</td>
</tr>
<tr>
<td>Mefenamic acid</td>
<td>Ponstel</td>
<td>250 mg QID</td>
</tr>
<tr>
<td><strong>Enolic acids</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piroxicam</td>
<td>Feldene</td>
<td>10, 20 mg q day</td>
</tr>
<tr>
<td>Phenylbutazone</td>
<td>Butazolidin</td>
<td>100 mg TID up to 600 mg/24h</td>
</tr>
<tr>
<td><strong>Napthylkanones</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nabumetone</td>
<td>Relafen</td>
<td>500 mg BID up to 1500 mg/24h</td>
</tr>
<tr>
<td><strong>Selective COX-2 inhibitors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celecoxib</td>
<td>Celebrex</td>
<td>100, 200 mg a day</td>
</tr>
</tbody>
</table>

FDA Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics 7/9/2012

<table>
<thead>
<tr>
<th>Drug Information Common to the Class of Extended-Release and Long-Acting Opioid Analgesics (ER/LA opioid analgesics)</th>
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</thead>
<tbody>
<tr>
<td>Avinza (morphine sulfate ER capsules) Butrans (buprenorphine transdermal system) Dolophine (methadone HCl tablets) Duragesic (fentanyl transdermal system) Embeda (morphine sulfate ER-naltrexone capsules) Exalgo (hydromorphone HCl ER tablets) Kadian (morphine sulfate ER capsules) MS Contin (morphine sulfate CR tablets) Nucynta ER (tapentadol HCl ER tablets) Opana ER (oxymorphone HCl ER tablets) OxyContin (oxycodone HCl CR tablets)</td>
</tr>
</tbody>
</table>

**Dosing Interval**
- Refer to individual product information.

**Key Instructions**
- Individually titrate to a dose that provides adequate analgesia and minimizes adverse reactions.
- The times required to reach steady-state plasma concentrations are product specific; refer to product information for titration interval.
- Continually reevaluate to assess the maintenance of pain control and the emergence of adverse reactions.
- During chronic therapy, especially for non-cancer-related pain, periodically reassess the continued need for opioids.
- If pain increases, attempt to identify the source, while adjusting the dose.
- When an ER/LA opioid analgesic is no longer required, gradually titrate downward to prevent signs and symptoms of withdrawal in the physically-dependent patient. **Do not abruptly discontinue these products.**
- Limitations of usage:
  - Not for use as an as-needed analgesic.
  - Not for mild pain or pain not expected to persist for an extended duration.
  - Not for use in treating acute pain.
- Solid oral dosage forms:
  - Swallow tablets and capsules whole: crushing, chewing, breaking, cutting or dissolving may result in rapid release and absorption of a potentially fatal dose of opioid.
  - Some capsules can be opened and pellets sprinkled on applesauce for patients who can reliably swallow without chewing and used immediately. See individual product information.
  - Exposure of some products to alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of opioid.
  - Dispose of unused product by flushing down the toilet.
- Transdermal dosage forms:
  - Avoid exposure to external heat. Patients with fever must be monitored for signs or symptoms of increased opioid exposure.
  - Location of application must be rotated.
  - Prepare skin by clipping, not shaving hair, and washing area only with water.
- See individual product information for the following:
  - Dosage reduction for hepatic or renal impairment.
**Drug Interactions Common to the Class**

- Concurrent use with other central nervous system depressants (sedatives, hypnotics, general anesthetics, antiemetics, phenothiazines, other tranquilizers, and alcohol) can increase the risk of respiratory depression, hypotension, profound sedation, or coma. Reduce the initial dose of one or both agents.
  - Partial agonists and mixed agonist/antagonist analgesics (i.e., buprenorphine, pentazocine, nalbuphine and butorphanol) may reduce the analgesic effect or precipitate withdrawal symptoms. Avoid concurrent use.
  - Opioids may enhance the neuromuscular blocking action of skeletal muscle relaxants and produce an increased degree of respiratory depression.
  - Concurrent use with anticholinergic medication increases the risk of urinary retention and severe constipation, which may lead to paralytic ileus.

**Use in Opioid-Tolerant Patients**

- See individual product information for which products:
  - Have strengths or total daily doses only for use in opioid-tolerant patients.
  - Are only for use in opioid-tolerant patients at all strengths.

**Contraindications**

- Significant respiratory depression
- Acute or severe asthma in an unmonitored setting or in the absence of resuscitative equipment
  - Known or suspected paralytic ileus
  - Hypersensitivity (e.g., anaphylaxis)

See individual product information for additional contraindications.

**Relative Potency To Oral Morphine**

- **These are intended as general guides.**
- Follow conversion instructions in individual product information.
- Incomplete cross-tolerance and inter-patient variability require the use of conservative dosing when converting from one opioid to another - halve the calculated comparable dose and titrate the new opioid as needed.
### Specific Drug Information for Extended-Release and Long-Acting Opioid Analgesics (ER/LA opioid analgesics)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Specific Drug Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Avinza</strong></td>
<td>Morphine Sulfate ER Capsules, 30 mg, 45 mg, 60 mg, 75 mg, 90 mg, and 120 mg</td>
</tr>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Once a day</td>
</tr>
<tr>
<td><strong>Key Instructions</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Initial dose in opioid non-tolerant patients is 30 mg.</td>
</tr>
<tr>
<td></td>
<td>▪ Titrate using a minimum of 3-day intervals.</td>
</tr>
<tr>
<td></td>
<td>▪ Swallow capsule whole (do not chew, crush, or dissolve).</td>
</tr>
<tr>
<td></td>
<td>▪ May open capsule and sprinkle pellets on applesauce for patients who can reliably swallow without chewing; use immediately.</td>
</tr>
<tr>
<td></td>
<td>▪ Maximum daily dose: 1600 mg due to risk of serious renal toxicity by excipient, fumaric acid.</td>
</tr>
<tr>
<td><strong>Specific Drug Interactions</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of morphine.</td>
</tr>
<tr>
<td></td>
<td>▪ PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold.</td>
</tr>
<tr>
<td><strong>Use in Opioid-Tolerant Patients</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>90 mg and 120 mg capsules are for use in opioid-tolerant patients only.</td>
</tr>
<tr>
<td><strong>Product-Specific Safety Concerns</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

| **Butrans** | Buprenorphine Transdermal System, 5 mcg/hr, 10 mcg/hr, 20 mcg/hr |
| **Dosing Interval** | One transdermal system every 7 days |
| **Key Instructions** | |
| | ▪ Initial dose in opioid non-tolerant patients when converting from less than 30 mg morphine equivalents, and in mild to moderate hepatic impairment - 5 mcg/hr dose. |
| | ▪ When converting from 30 mg to 80 mg morphine equivalents - first taper to 30 mg morphine equivalent, then initiate with 10 mcg/hr dose. |
| | ▪ Titrate after a minimum of 72 hours prior to dose adjustment. |
| | ▪ Maximum dose: 20 mcg/hr due to risk of QTc prolongation. |
| | ▪ Application Apply only to sites indicated in the Full Prescribing Information. Apply to intact/non-irritated skin. Skin may be prepped by clipping hair, washing site with water only. |
| | ▪ Rotate site of application a minimum of 3 weeks before reapplying to the same site. |
| | ▪ Do not cut. |
| | ▪ Avoid exposure to heat. |
| | ▪ Dispose of used/unused patches by folding the adhesive side together and flushing down the toilet. |
| Specific Drug Interactions | CYP3A4 Inhibitors may increase buprenorphine levels.  
| | CYP3A4 Inducers may decrease buprenorphine levels.  
| | Benzodiazepines may increase respiratory depression.  
| | Class IA and III antiarythmics, other potentially arrhythmogenic agents, may increase risk for QTc prolongation and torsade de pointe.  |
| Use in Opioid-Tolerant Patients | Butrans 10 mcg/hr and 20 mcg/hr transdermal systems are for use in opioid-tolerant patients only.  |
| Drug-Specific Safety Concerns | QTc prolongation and torsade de pointe.  
| | Hepatotoxicity  
| | Application site skin reactions  |
| Relative Potency To Oral Morphine | Equipotency to oral morphine has not been established.  |
| Dolophine | Methadone Hydrochloride  
| Tablets, 5 mg and 10 mg  |
| Dosing Interval | Every 8 to 12 hours  |
| Key Instructions | Initial dose in opioid non-tolerant patients: 2.5 to 10 mg  
| | Conversion of opioid-tolerant patients using equianalgesic tables can result in overdose and death. Use low doses according to the table in the full prescribing information.  
| | High inter-patient variability in absorption, metabolism, and relative analgesic potency.  
| | Opioid detoxification or maintenance treatment shall only be provided in a federally certified opioid (addiction) treatment program (Code of Federal Regulations, Title 42, Sec 8).  |
| Specific Drug Interactions | Pharmacokinetic drug-drug interactions with methadone are complex.  
| | CYP 450 inducers may increase methadone levels.  
| | CYP 450 inhibitors may decrease methadone levels.  
| | Anti-retroviral agents have mixed effects on methadone levels.  
| | Potentially arrhythmogenic agents may increase risk for QTc prolongation and torsade de pointe.  
| | Benzodiazepines may increase respiratory depression  |
| Use in Opioid-Tolerant Patients | Refer to full prescribing information.  |
| Product-Specific Safety Concerns | QTc prolongation and torsade de pointe.  
| | Peak respiratory depression occurs later and persists longer than analgesic effect.  
| | Clearance may increase during pregnancy.  
<p>| | False positive urine drug screens possible.  |</p>
<table>
<thead>
<tr>
<th>Relative Potency To Oral Morphine</th>
<th>Varies depending on patient’s prior opioid experience.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duragesic</strong></td>
<td>Fentanyl Transdermal System, 12, 25, 50, 75, and 100 mcg/hr</td>
</tr>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Every 72 hours (3 days)</td>
</tr>
</tbody>
</table>
| **Key Instructions**             | - Use product specific information for dose conversion from prior opioid  
   - Use 50% of the dose in mild or moderate hepatic or renal impairment, avoid use in severe hepatic or renal impairment  
   - Application  
     Apply to intact/non-irritated/non-irradiated skin on a flat surface. Skin may be prepped by clipping hair, washing site with water only  
   - Rotate site of application.  
   - Titrate using no less than 72 hour intervals.  
   - Do not cut.  
   - Avoid exposure to heat.  
   - Avoid accidental contact when holding or caring for children.  
   - Dispose of used/unused patches by folding the adhesive side together and flushing down the toilet.  
   **Specific contraindications:**  
   - Patients who are not opioid-tolerant.  
   - Management of acute or intermittent pain, or in patients who require opioid analgesia for a short period of time.  
   - Management of post-operative pain, including use after outpatient or day surgery.  
   - Management of mild pain.  
| **Specific Drug Interactions**   | - CYP3A4 inhibitors may increase fentanyl exposure.  
   - CYP3A4 inducers may decrease fentanyl exposure. |
| **Use in Opioid-Tolerant Patients** | All doses of Duragesic are indicated for use in opioid-tolerant patients only. |
| **Product-Specific Safety Concerns** | - Accidental exposure due to secondary exposure to unwashed/unclothed application site.  
   - Increased drug exposure with increased core body temperature or fever.  
   - Bradycardia  
   - Application site skin reactions |
| **Relative Potency To Oral Morphine** | See individual product information for conversion recommendations from prior opioid |
| **Embeda** | Morphine Sulfate ER-Naltrexone  
Capsules, 20 mg/0.8 mg, 30 mg/1.2 mg, 50 mg/2 mg, 60 mg/2.4 mg, 80 mg/3.2 mg, 100 mg/4 mg |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Once a day or every 12 hours</td>
</tr>
</tbody>
</table>
| **Key Instructions** | - Initial dose as first opioid: 20 mg/0.8 mg.  
- Titrate using a minimum of 3-day intervals.  
- Swallow capsules whole (do not chew, crush, or dissolve)  
- Crushing or chewing will release morphine, possibly resulting in fatal overdose, and naltrexone, possibly resulting in withdrawal symptoms.  
- May open capsule and sprinkle pellets on applesauce for patients who can reliably swallow without chewing, use immediately. |
| **Specific Drug Interactions** | - Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of morphine.  
- PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold. |
| **Use in Opioid-Tolerant Patients** | Embeda 100 mg/4 mg capsule is for use in opioid-tolerant patients only. |
| **Product-Specific Safety Concerns** | None |

| **Exalgo** | Hydromorphone Hydrochloride  
Extended-Release Tablets, 8 mg, 12 mg or 16 mg |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Once a day</td>
</tr>
</tbody>
</table>
| **Key Instructions** | - Use the conversion ratios in the individual product information.  
- Start patients with moderate hepatic impairment on 25% dose that would be prescribed for a patient with normal hepatic function.  
- Start patients with moderate renal impairment on 50%, and patients with severe renal impairment on 25% of the dose that would be prescribed for a patient with normal renal function.  
- Titrate using a minimum of 3 to 4 day intervals.  
- Swallow tablets whole (do not chew, crush, or dissolve).  
- Do not use in patients with sulfa allergy—contains sodium metabisulfite. |
<p>| <strong>Specific Drug Interactions</strong> | None |
| <strong>Use in Opioid-Tolerant Patients</strong> | All doses of Exalgo are indicated for opioid-tolerant patients only. |
| <strong>Drug-Specific Adverse Reactions</strong> | Allergic manifestations to sulfa component. |
| <strong>Relative Potency To Oral Morphine</strong> | Approximately 5:1 oral morphine to hydromorphone oral dose ratio, use conversion recommendations in the individual product information. |</p>
<table>
<thead>
<tr>
<th><strong>Kadian</strong></th>
<th>Morphine Sulfate Extended-Release Capsules, 10 mg, 20mg, 30 mg, 50 mg, 60 mg, 80 mg, 100 mg, and 200 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Once a day or every 12 hours</td>
</tr>
</tbody>
</table>
| **Key Instructions** | - Product information recommends not using as first opioid.  
- Titrate using a minimum of 2-day intervals.  
- Swallow capsules whole (do not chew, crush, or dissolve).  
- May open capsule and sprinkle pellets on applesauce for patients who can reliably swallow without chewing, use immediately. |
| **Specific Drug Interactions** | - Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of morphine.  
- PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold. |
| **Use in Opioid-Tolerant Patients** | Kadian 100 mg and 200 mg capsules are for use in opioid-tolerant patients. |
| **Product-Specific Safety Concerns** | None |

<table>
<thead>
<tr>
<th><strong>MS Contin</strong></th>
<th>Morphine Sulfate Controlled-release Tablets, 15 mg, 30 mg, 60 mg, 100 mg, and 200 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Every 8 hours or every 12 hours</td>
</tr>
</tbody>
</table>
| **Key Instructions** | - Product information recommends not using as first opioid.  
- Titrate using a minimum of 2-day intervals.  
- Swallow tablets whole (do not chew, crush, or dissolve). |
| **Specific Drug Interactions** | PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold. |
| **Use in Opioid-Tolerant Patients** | MS Contin 100 mg and 200 mg tablet strengths are for use in opioid-tolerant patients only. |
| **Product-Specific Safety Concerns** | None |

<table>
<thead>
<tr>
<th><strong>Nucynta ER</strong></th>
<th>Tapentadol Extended-Release Tablets, 50 mg, 100mg, 150 mg, 200 mg, and 250 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dosing Interval</strong></td>
<td>Every 12 hours</td>
</tr>
</tbody>
</table>
| Key Instructions | Use 50 mg every 12 hours as initial dose in opioid non-tolerant patients
|                  | Titrate by 50 mg increments using a minimum of 3-day intervals.
|                  | Maximum total daily dose is 500 mg
|                  | Swallow tablets whole (do not chew, crush, or dissolve).
|                  | Take one tablet at a time and with enough water to ensure complete swallowing immediately after placing in the mouth.
|                  | Dose once daily in moderate hepatic impairment with 100 mg per day maximum
|                  | Avoid use in severe hepatic and renal impairment. |
| Specific Drug Interactions | Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of tapentadol.
|                        | Contraindicated in patients taking MAOIs. |
| Use in Opioid-Tolerant Patients | No product-specific considerations. |
| Product-Specific Safety Concerns | Risk of serotonin syndrome
|                                    | Angioedema |
| Relative Potency To Oral Morphine | Equipotency to oral morphine has not been established. |
| **Opana ER** | Oxymorphone Hydrochloride ER Tablets, 5 mg, 7.5 mg, 10 mg, 15 mg, 20 mg, 30 mg, and 40 mg |
| Dosing Interval | Every 12h dosing, some may benefit from asymmetric (different dose given in AM than in PM) dosing. |
| Key Instructions | Use 5 mg every 12 hours as initial dose in opioid non-tolerant patients and patients with mild hepatic impairment and renal impairment (creatinine clearance < 50 mL/min) and patients over 65 years of age
|                  | Swallow tablets whole (do not chew, crush, or dissolve).
|                  | Take one tablet at a time, with enough water to ensure complete swallowing immediately after placing in the mouth.
|                  | Titrate using a minimum of 2-day intervals.
<p>|                  | Contraindicated in moderate and severe hepatic impairment. |
| Specific Drug Interactions | Alcoholic beverages or medications containing alcohol may result in the absorption of a potentially fatal dose of oxymorphone. |
| Use in Opioid-Tolerant Patients | No product specific considerations. |
| Product-Specific Safety Concerns | None |</p>
<table>
<thead>
<tr>
<th>Relative Potency To Oral Morphine</th>
<th>Approximately 3:1 oral morphine to oxymorphone oral dose ratio</th>
</tr>
</thead>
</table>
| **OxyContin**                    | ▪ Oxycodone Hydrochloride  
▪ Controlled-release Tablets, 10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 60 mg, and 80 mg |
| **Dosing Interval**              | ▪ Every 12 hours |
| **Key Instructions**             | ▪ Opioid-naive patients: initiate treatment with 10 mg every 12 hours.  
▪ Titrate using a minimum of 1 to 2 day intervals.  
▪ Hepatic impairment: start with one third to one half the usual dosage.  
▪ Renal impairment (creatinine clearance <60 mL/min): start with one half the usual dosage.  
▪ Consider use of other analgesics in patients who have difficulty swallowing or have underlying GI disorders that may predispose them to obstruction. Swallow tablets whole (do not chew, crush, or dissolve).  
▪ Take one tablet at a time, with enough water to ensure complete swallowing immediately after placing in the mouth. |
| **Specific Drug Interactions**   | ▪ CYP3A4 inhibitors may increase oxycodone exposure.  
▪ CYP3A4 inducers may decrease oxycodone exposure. |
| **Use in Opioid-Tolerant Patients** | ▪ Single dose greater than 40 mg or total daily dose greater than 80 mg are for use in opioid-tolerant patients only. |
| **Product-Specific Safety Concerns** | ▪ Choking, gagging, regurgitation, tablets stuck in the throat, difficulty swallowing the tablet.  
▪ Contraindicated in patients with gastrointestinal obstruction. |
| **Relative Potency To Oral Morphine** | Approximately 2:1 oral morphine to oxycodone oral dose ratio. |

For detailed information, refer to prescribing information available online via DailyMed at [www.dailymed.nlm.nih.gov](http://www.dailymed.nlm.nih.gov) or Drugs@FDA at [www.fda.gov/drugsatfda](http://www.fda.gov/drugsatfda).
Opioid conversion tips

Calculating the rescue dose
1. Calculate 10% of the provided total daily opioid dose as an immediate-release formulation.

Opioid adjustments
1. Calculate the total oral 24-hour opioid taken by adding the amount of the sustained-release and immediate-release rescue doses.
2. Divide total daily dose into appropriate intermittent doses based upon the specific opioid dosing intervals found in the “Dosing and Conversion Chart for Opioid Analgesics.”
3. Modify by reducing dose by 25%-50% for incomplete cross-tolerance.

Changing an oral opioid to its IV/SQ route
1. Calculate the total amount of oral opioid taken per 24 hours (add long-acting and rescue doses).
2. Use the “Dosing and Conversion Chart for Opioid Analgesics” to calculate the equivalent total daily parenteral dose.
3. Divide the dose by 24 to get the hourly drip rate.

Changing an oral or IV opioid to transdermal fentanyl
1. Calculate the total opioid dose.
2. Use the “Dosing and Conversion Chart for Opioid Analgesics” to calculate the equivalent total daily morphine dose.
3. Use the “Morphine to Fentanyl Equivalents” chart to determine the equianalgesic dose of transdermal fentanyl.
4. Adjust the dose for incomplete cross tolerance by reducing dose by 25%-50%.
5. Divide adjusted dose by 24 to obtain hourly opioid infusion rate.

Changing to another oral opioid

Question:
A patient is taking sustained-release oxycodone, 100 mg every 12 hours, but has developed intolerable sedation. She would like to try an immediate-release opioid agent, hydromorphone. What is the equivalent dose of hydromorphone?

Answer:
The “Dosing and Conversion Chart for Opioid Analgesics” will help you calculate the equivalent dose of the new opioid, but you must allow for the incomplete nature of cross tolerance to opioid side effects.

After patients take the same opioid dose for a week or two, they become tolerant of the opioid’s sedative and respiratory depressive effects. When another opioid is substituted for the original opioid, patients will not be completely tolerant to the new opioid’s side effects, which can lead to over-sedation or confusion. You must calculate the equianalgesic dose of the new opioid, and then reduce the dose by 25%-50%.

The single exception to this rule is when prescribing fentanyl. The equianalgesic tables for fentanyl have been adjusted, so you can use the doses given in the “Conversion to Transdermal Fentanyl (Duragesic)” fentanyl/morphine conversion tables without further adjustment.

Calculate the total daily dose of oxycodone:
100 mg x 2 = 200 mg

Use the “Dosing and Conversion Chart for Opioid Analgesics” to calculate the equivalent oral hydromorphone dose (the conversion ratio of oxycodone to hydromorphone is 20:7.5, or 2.6:1):
200 mg oxycodone / 2.6 = 77 mg oral hydromorphone (round off to 75 mg)

Adjust the total 24-hour oral hydromorphone dose downward by 25%-50%:
75 mg x 2/3 = 50 mg

Divide the total daily dose of hydromorphone into appropriate intermittent doses based upon the “Dosing and Conversion Chart for Opioid Analgesics”:
50 mg / 6 doses per day = 8 mg every 4 hours
### Dosing and Conversion Chart for Opioid Analgesics

<table>
<thead>
<tr>
<th>Drug</th>
<th>Route</th>
<th>Equianalgesic Dose (mg)</th>
<th>Duration (h)</th>
<th>Plasma Half-Life (h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>IM</td>
<td>10</td>
<td>4</td>
<td>2-3.5</td>
</tr>
<tr>
<td>Morphine</td>
<td>PO</td>
<td>30</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Codeine</td>
<td>IM</td>
<td>130</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Codeine</td>
<td>PO</td>
<td>300</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Oxycodeone</td>
<td>IM</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxycodeone</td>
<td>PO</td>
<td>30</td>
<td>3-4</td>
<td>4</td>
</tr>
<tr>
<td>Hydromorphone (Dilaudid)</td>
<td>IM</td>
<td>1.5</td>
<td>4</td>
<td>2-3</td>
</tr>
<tr>
<td>Hydromorphone (Dilaudid)</td>
<td>PO</td>
<td>7.5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Meperidine</td>
<td>IM</td>
<td>75</td>
<td>3-4</td>
<td>2</td>
</tr>
<tr>
<td>Meperidine</td>
<td>PO</td>
<td>300</td>
<td>3-4</td>
<td>normeperidine</td>
</tr>
<tr>
<td>Methadone</td>
<td>IM</td>
<td>10*</td>
<td>6-8†</td>
<td>12-24</td>
</tr>
<tr>
<td>Methadone</td>
<td>PO</td>
<td>20*</td>
<td>6-8†</td>
<td>20-200</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>IV</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocodeone</td>
<td>IM</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocodeone</td>
<td>PO</td>
<td>30</td>
<td>3-4</td>
<td>4</td>
</tr>
</tbody>
</table>


*The equianalgesic dose of methadone compared to other opioids is extremely variable with chronic dosing. Conversion from oral morphine to oral methadone may range from 4 to 14:1.

† Risk of CNS depression with repeated use; accumulation in elderly or persons with impaired renal function with regular dosing.

Monitor for patient variability in duration of efficacy.

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### When is it addiction?

How can you tell if your patient is truly addicted to opioids? The following definitions are jointly from The American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine:

**Addiction**: Addiction is a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations. It is characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving.

**Physical Dependence**: Physical dependence is a state of adaptation that is manifested by a drug-class-specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist.

**Tolerance**: Tolerance is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug’s effects over time.
The equianalgesic dose of methadone compared to other opioids is extremely variable with chronic dosing. Conversion from oral morphine to oral methadone may range from 4 to 14:1.

† Risk of CNS depression with repeated use; accumulation in elderly or persons with impaired renal function with regular dosing. Monitor for patient variability in duration of efficacy.

Source: PIER modules on Pain and Opioid Abuse.©2007 by the American College of Physicians.

The information included herein should never be used as a substitute for clinical judgment and does not represent an official position of ACP. Check the PIER Web site (http://pier.acponline.org) for the most current information available.
Side effects other than constipation usually subside during prolonged treatment but occasionally persist. Other adverse effects include addiction and complex problems in functioning or quality of life. There are no accepted or validated risk factors for these effects, but it is widely acknowledged that there is a link between previous drug or alcohol abuse and addiction to opioids prescribed for pain. Deterioration in functioning or quality of life appears to be closely associated with lack of motivation to improve; young adults are the most susceptible to this type of deterioration.

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AUDIT

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential, so please be honest.

For each question in the chart below, place an X in one box that best describes your answer.

NOTE: In the U.S., a single drink serving contains about 14 grams of ethanol or “pure” alcohol. Although the drinks below are different sizes, each one contains the same amount of pure alcohol and counts as a single drink:

12 oz. of beer
(about 5% alcohol)

8-9 oz. of malt liquor
(about 7% alcohol)

5 oz. of wine
(about 12% alcohol)

1.5 oz. of hard liquor
(about 40% alcohol)

<table>
<thead>
<tr>
<th>Questions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you have a drink containing alcohol?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2 to 4 times a month</td>
<td>2 to 3 times a week</td>
<td>4 or more times a week</td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
</tr>
<tr>
<td>3. How often do you have 5 or more drinks on one occasion?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>4. How often during the last year have you found that you were not able to stop drinking once you had started?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>5. How often during the last year have you failed to do what was normally expected of you because of drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>8. How often during the last year have you been unable to remember what happened the night before because of your drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>9. Have you or someone else been injured because of your drinking?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total

Note: This questionnaire (the AUDIT) is reprinted with permission from the World Health Organization. To reflect drink serving sizes in the United States (14g of pure alcohol), the number of drinks in question 3 was changed from 6 to 5. A free AUDIT manual with guidelines for use in primary care settings is available online at www.who.org.

Excerpted from NIH Publication No. 07-3769 National Institute on Alcohol and Alcoholism www.niaaa.nih.gov/guide
**PROGRESS NOTE**

**Pain Assessment and Documentation Tool (PADT™)**

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>Record #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Date:</td>
<td></td>
</tr>
</tbody>
</table>

**Current Analgesic Regimen**

<table>
<thead>
<tr>
<th>Drug name</th>
<th>Strength (eg, mg)</th>
<th>Frequency</th>
<th>Maximum Total Daily Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The PADT is a clinician-directed interview; that is, the clinician asks the questions, and the clinician records the responses. The Analgesia, Activities of Daily Living, and Adverse Events sections may be completed by the physician, nurse practitioner, physician assistant, or nurse. The Potential Aberrant Drug-Related Behavior and Assessment sections must be completed by the physician. Ask the patient the questions below, except as noted.

### Analgesia

If zero indicates "no pain" and ten indicates "pain as bad as it can be," on a scale of 0 to 10, what is your level of pain for the following questions?

1. What was your pain level on average during the past week? (Please circle the appropriate number)
   - No Pain: 0 1 2 3 4 5 6 7 8 9 10
   - Pain as bad as it can be

2. What was your pain level at its worst during the past week?
   - No Pain: 0 1 2 3 4 5 6 7 8 9 10
   - Pain as bad as it can be

3. What percentage of your pain has been relieved during the past week? (Write in a percentage between 0% and 100%)

4. Is the amount of pain relief you are now obtaining from your current pain reliever(s) enough to make a real difference in your life?
   - Yes ☐ No ☐

5. Query to clinician: Is the patient's pain relief clinically significant?
   - Yes ☐ No ☐ Unsure ☐

### Activities of Daily Living

Please indicate whether the patient's functioning with the current pain reliever(s) is Better, the Same, or Worse since the patient's last assessment with the PADT™. (Please check the box for Better, Same, or Worse for each item below.)

<table>
<thead>
<tr>
<th>Better</th>
<th>Same</th>
<th>Worse</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
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</tbody>
</table>

*If the patient is receiving his or her first PADT assessment, the clinician should compare the patient's functional status with other reports from the last office visit.*

(Continued on reverse side)
## PROGRESS NOTE
### Pain Assessment and Documentation Tool (PADT™)

<table>
<thead>
<tr>
<th>Adverse Events</th>
<th>Potential Aberrant Drug-Related Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is patient experiencing any side effects from current pain reliever(s)? □ Yes □ No</td>
<td>This section must be completed by the physician.</td>
</tr>
<tr>
<td>□ None □ Mild □ Moderate □ Severe</td>
<td>Please check any of the following items that you discovered during your interactions with the patient. Please note that some of these are directly observable (e.g., appears intoxicated), while others may require more active listening and/or probing. Use the “Assessment” section below to note additional details.</td>
</tr>
<tr>
<td>a. Nausea</td>
<td>□ Purposeful oversedation</td>
</tr>
<tr>
<td>b. Vomiting</td>
<td>□ Negative mood change</td>
</tr>
<tr>
<td>c. Constipation</td>
<td>□ Appears intoxicated</td>
</tr>
<tr>
<td>d. Itching</td>
<td>□ Increasingly unkempt or impaired</td>
</tr>
<tr>
<td>e. Mental cloudiness</td>
<td>□ Involvement in car or other accidents</td>
</tr>
<tr>
<td>f. Sweating</td>
<td>□ Requests frequent early renewals</td>
</tr>
<tr>
<td>g. Fatigue</td>
<td>□ Increased dose without authorization</td>
</tr>
<tr>
<td>h. Drowsiness</td>
<td>□ Reports lost or stolen prescriptions</td>
</tr>
<tr>
<td>i. Other</td>
<td>□ Attempts to obtain prescriptions from other doctors</td>
</tr>
<tr>
<td>j. Other</td>
<td>□ Changes route of administration</td>
</tr>
<tr>
<td>2. Patient’s overall severity of side effects? □ None □ Mild □ Moderate □ Severe</td>
<td>□ Uses pain medication in response to situational stressor</td>
</tr>
<tr>
<td>□ Insists on certain medications by name</td>
<td></td>
</tr>
<tr>
<td>□ Contact with street drug culture</td>
<td></td>
</tr>
<tr>
<td>□ Abusing alcohol or illicit drugs</td>
<td></td>
</tr>
<tr>
<td>□ Hoarding (i.e., stockpiling) of medication</td>
<td></td>
</tr>
<tr>
<td>□ Arrested by police</td>
<td></td>
</tr>
<tr>
<td>□ Victim of abuse</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment:** (This section must be completed by the physician.)

Is your overall impression that this patient is benefiting (eg, benefits, such as pain relief, outweigh side effects) from opioid therapy? □ Yes □ No □ Unsure

Comments: 

**Specific Analgesic Plan:**

□ Continue present regimen Comments: 

□ Adjust dose of present analgesic

□ Switch analgesics

□ Add/Adjust concomitant therapy

□ Discontinue/taper off opioid therapy

Date: ___________________________ Physician’s signature: ___________________________
The Pain Outcomes Profile

Why Measure Outcomes?
By selecting the American Academy of Pain Management’s (the Academy) Pain Outcomes Profile (POP) as your pain management assessment instrument, you will take an important step toward gathering data pertaining to the relevant health outcomes of patients you treat for pain.

Use of the Pain Outcomes Profile will assist you in preparing to comply with standards put in place by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in 2001. These standards require healthcare providers to:

- Recognize the right of patients to receive appropriate assessment and management of pain
- Establish the existence of pain and assess its nature and intensity in all patients
- Record the results of the assessment in a way that facilitates regular reassessment and follow-up
- Determine and assure staff competency in pain assessment and management, and address pain assessment and management in the orientation of all new staff
- Establish policies and procedures which support the appropriate prescription or ordering of effective pain medications
- Educate patients and their families about effective pain management
- Address patient needs for symptom management in the discharge planning process

The POP will also help you to satisfy Pain Program Accreditation (PPA) standards established by the Academy requiring the use of an outcomes measurement system. Finally, the POP can assist you in meeting standards established by the Commission on Accreditation of Rehabilitation Facilities (CARF) for Information and Outcomes Management Systems.

Measuring outcomes allows for the enhancement of clinical services through a process of continuous quality improvement. Patients and payers alike increasingly demand accountability on the part of treatment providers and use of the POP may be one component of your overall outcomes measurement strategy.

Please note that the current release of the POP does not provide for the collection of important demographic, diagnostic, treatment, medical utilization, or patient satisfaction data. You will need to devise a strategy to examine these data (that may already exist within your patient records) in order to establish a comprehensive outcomes measurement process.
About the Pain Outcomes Profile

Domains and Scales
The Pain Outcomes Profile (POP) is a 23-item questionnaire that utilizes 11-point, 0 to 10, numerical rating scales (NRS) to assess a number of relevant dimensions in the pain patient’s experience. The POP was developed by the American Academy of Pain Management and Drs. Michael Clark and Ron Gironda at the James A. Haley Veterans Hospital in Tampa, Florida.

The POP assesses three domains of a patient’s pain experience with 20 core clinical items: pain perception, perceived physical impairment due to pain and several aspects of emotional functioning. These domains are assessed using two pain intensity scales, three self-report of functional impairment scales and two scales that address self-reported emotional functioning (seven scales total).

The POP contains two Numerical Rating Scales to assess the patient’s experience of pain intensity right now and pain on the average during the last week.

There are three scales in the domain of perceived functional impairment due to pain: MOBILITY, ACTIVITIES OF DAILY LIVING (ADL’S), and VITALITY. The MOBILITY scale contains four items that rate a patient’s perception of pain-related interference with the ability to walk, carry or handle everyday objects, climb stairs, and whether pain requires the use of assistive devices (e.g., a walking aid or wheelchair). ACTIVITIES OF DAILY LIVING (ADL’s) are assessed with four items that inquire about pain-related interference with the ability to bathe, dress, use the bathroom, and manage personal grooming. The patient’s subjective feeling of a lack of VITALITY is assessed with three items rating the ability to perform physical activities, feelings of overall energy, and strength, and endurance.

Self-reported emotional functioning is assessed with two scales: NEGATIVE AFFECT and FEAR. The NEGATIVE AFFECT scale contains five items asking the patient to rate the degree to which pain affects self-esteem, feelings of depression, feelings of anxiety, ability to concentrate, and feelings of subjective tension. The FEAR scale contains two items that rate how much worry is experienced about re-injury due to increasing activity and feelings of safety exercising.

Psychometric Properties of the Pain Outcomes Profile (POP)
Further psychometric analysis of data collected in the VA medical system determined which items from the NPDB had the greatest reliability and validity. Weaker items were eliminated and several new items were added to enhance the psychometric properties of an improved brief pain outcomes measurement instrument.

In an article published in the Journal of Rehabilitation Research and Development (Vol. 40, No. 5, Sept/Oct 2003, pages: 381-396), Drs. Clark, Gironda, and Young trace the
development of the final brief pain outcomes questionnaire in the five-year cooperative VA-AAPM project that originated with the National Pain Data Bank long forms. They conclude that the new instrument is reliable, valid, and clinically useful in evaluating the effectiveness of treatment for veterans experiencing chronic non-cancer pain.

The Pain Outcomes Questionnaire-VA Short Form is the name given to the instrument designed for use in the VA system. A second VA version of the questionnaire allows for the gathering of additional demographic, patient satisfaction and healthcare utilization data at three different time points (just as the National Pain Data Bank does). This longer (44-item at intake) version is called the Pain Outcomes Questionnaire-VA (POQ-VA).

The Academy named the new short form the Pain Outcomes Profile (POP) to distinguish it from the version used in the VA. The POP includes 19 items which are identical to the primary pain outcomes items that appear on the POQ-VA Short Form, with an additional item retained from the NPDB Short Form that assesses pain right now. The POQ-VA Short Form contains only one pain NRS, a rating of pain intensity on average during the last week. The POP includes the pain right now item because it is believed to have clinical utility. Also, in finalizing the POP, the order of the items on the instrument was rearranged so that questions from the different content scales appear in a counterbalanced fashion to prevent the patient from developing a “response set.” This problem may occur in psychometric testing when all of the items for a given scale appear together on a questionnaire. When comparing results from the POQ-VA Short Form and the POP for research purposes, it is important to examine only the 19 items that the two instruments share.

The Academy is currently working with several independent pain programs across the country, gathering data to document the psychometric properties of the POP and to establish norms with different patient samples. Please see the American Pain Society Meeting abstract on this website for more information. Also, the POP has been translated into Spanish and is available for field-testing. Please contact Alexandra Campbell, PhD, at the American Academy of Pain Management, 13947 Mono Way, Suite A, Sonora, CA 95370; (209) 533-9744, email: alex@aapainmanage.org if you are interested in participating in research on the Pain Outcomes Profile.

The Academy is dedicated to helping pain practitioners accomplish the important task of documenting treatment outcomes. The Academy still offers the National Pain Data Bank long forms with comparison reports to large pain programs and research-oriented institutions. For smaller clinics and the solo practitioner, especially those utilizing opioid analgesics with chronic pain patients, the more efficient Pain Outcomes Profile Plus software will be available in the future. If you would like to order the POP paper/pencil version, please print and mail or fax the order form to the Academy.
Patient Name

Patient ID #

1. Enter today's date: _______ / _______ / _______ (MM/DD/YY)

2. Enter your date of birth: _______ / _______ / _______ (MM/DD/YY)

3. How long have you had the pain for which you are now seeking treatment?
   _______ Years _______ Months

4. On a scale of 0 to 10, with 0 being no pain at all and 10 being the worst possible pain, how would you rate your pain right now?
   0 1 2 3 4 5 6 7 8 9 10
   no pain at all worst possible pain

5. How would you rate your pain on the average during the last week?
   0 1 2 3 4 5 6 7 8 9 10
   no pain at all worst possible pain

6. Does your pain affect your self-esteem or self-worth?
   0 1 2 3 4 5 6 7 8 9 10
   not at all all the time

7. Does your pain interfere with your ability to walk?
   0 1 2 3 4 5 6 7 8 9 10
   not at all all the time

8. Does your pain interfere with your ability to bathe yourself?
   0 1 2 3 4 5 6 7 8 9 10
   not at all all the time

9. How would you rate your physical activity?
   0 1 2 3 4 5 6 7 8 9 10
   can perform vigorous activities without limitation

10. How would you rate your feelings of depression today?
    0 1 2 3 4 5 6 7 8 9 10
    not depressed at all extremely depressed

Please turn over
11. Does your pain interfere with your ability to carry/handle everyday objects such as a bag of groceries or books?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

12. Does your pain interfere with your ability to dress yourself?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

13. How would you rate your overall energy?
0 1 2 3 4 5 6 7 8 9 10
totally worn out

14. How much do you worry about re-injuring yourself if you are more active?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

15. How would you rate your feelings of anxiety today?
0 1 2 3 4 5 6 7 8 9 10
not anxious extremely anxious

16. Does your pain interfere with your ability to climb stairs?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

17. Does your pain interfere with your ability to use the bathroom?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

18. How would you rate your strength and endurance today?
0 1 2 3 4 5 6 7 8 9 10
very poor strength and endurance very high strength and endurance

19. Do you have problems concentrating on things today?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

20. Does your pain require you to use a cane, walker, wheelchair or other devices?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

21. Does your pain interfere with your ability to manage your personal grooming?
for example combing your hair, brushing your teeth, etc
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

22. How often do you feel tense?
0 1 2 3 4 5 6 7 8 9 10
not at all all the time

23. How safe do you think it is for you to exercise?
0 1 2 3 4 5 6 7 8 9 10
not safe extremely safe

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Introduction

The Federation of State Medical Boards (the Federation) is committed to assisting state medical boards in protecting the public and improving the quality and integrity of health care in the United States. In 1997, the Federation undertook an initiative to develop model guidelines and to encourage state medical boards and other health care regulatory agencies to adopt policy encouraging adequate treatment, including use of opioids when appropriate for patients with pain. The Federation thanks the Robert Wood Johnson Foundation for awarding a grant in support of the original project, and the American Academy of Pain Medicine, the American Pain Society, the American Society of Law, Medicine, & Ethics, and the University of Wisconsin Pain & Policy Studies Group for their contributions.

Since adoption in April 1998, the Model Guidelines for the Use of Controlled Substances for the Treatment of Pain have been widely distributed to state medical boards, medical professional organizations, other health care regulatory boards, patient advocacy groups, pharmaceutical companies, state and federal regulatory agencies, and practicing physicians and other health care providers. The Model Guidelines have been endorsed by the American Academy of Pain Medicine, the Drug Enforcement Administration, the American Pain Society, and the National Association of State Controlled Substances Authorities. Many states have adopted pain policy using all or part of the Model Guidelines. Despite increasing concern in recent years regarding the abuse and diversion of controlled substances, pain policies have improved due to the efforts of medical, pharmacy, and nursing regulatory boards committed to improving the quality of and access to appropriate pain care.

Notwithstanding progress to date in establishing state pain policies recognizing the legitimate uses of opioid analgesics, there is a significant body of evidence suggesting that both acute and chronic pain continue to be undertreated. Many terminally ill patients unnecessarily experience moderate to severe pain in the last weeks of life. The undertreatment of pain is recognized as a serious public health problem that results in a decrease in patients’ functional status and quality of life and may be attributed to a myriad of social, economic, political, legal and educational factors, including inconsistencies and restrictions in state pain policies. Circumstances that contribute to the prevalence of undertreated pain include: (1) lack of knowledge of medical standards, current research, and clinical guidelines for appropriate pain treatment; (2) the perception that prescribing adequate amounts of controlled substances will result in unnecessary scrutiny by regulatory authorities; (3) misunderstanding of addiction and dependence; and (4) lack of understanding of regulatory policies and processes. Adding to this problem is the reality that the successful implementation of state medical board pain policy varies among jurisdictions.

In April 2003, the Federation membership called for an update to its Model Guidelines to assure currency and adequate attention to the undertreatment of pain. The goal of the revised model policy is to provide state medical boards with an updated template regarding the appropriate management of pain in compliance with applicable state and federal laws and regulations. The revised policy notes that the state medical board will consider inappropriate treatment, including the undertreatment of pain, a departure from an acceptable standard of practice. The title of the policy has been changed from Model Guidelines to Model Policy to better reflect the practical use of the document.
The \textit{Model Policy} is designed to communicate certain messages to licensees: that the state medical board views pain management to be important and integral to the practice of medicine; that opioid analgesics may be necessary for the relief of pain; that the use of opioids for other than legitimate medical purposes poses a threat to the individual and society; that physicians have a responsibility to minimize the potential for the abuse and diversion of controlled substances; and that physicians will not be sanctioned solely for prescribing opioid analgesics for legitimate medical purposes. This policy is not meant to constrain or dictate medical decision-making.

Through this initiative, the Federation aims to achieve more consistent policy in promotion of adequate pain management and education of the medical community about treating pain within the bounds of professional practice and without fear of regulatory scrutiny. In promulgating this \textit{Model Policy}, the Federation strives to encourage the legitimate medical uses of controlled substances for the treatment of pain while stressing the need to safeguard against abuse and diversion.

State medical boards are encouraged, in cooperation with their state’s attorney general, to evaluate their state pain policies, rules, and regulations to identify any regulatory restrictions or barriers that may impede the effective use of opioids to relieve pain. Accordingly, this \textit{Model Policy} has been revised to emphasize the professional and ethical responsibility of the physician to assess patients’ pain as well as to update references and definitions of key terms used in pain management.

The \textit{Model Policy} is not intended to establish clinical practice guidelines nor is it intended to be inconsistent with controlled substance laws and regulations.

1. As of January 2004, 22 of 70 state medical boards have policy, rules, regulations or statutes reflecting the Federation’s \textit{Model Guidelines for the Use of Controlled Substances for the Treatment of Pain} and two (2) states have formally endorsed the \textit{Model Guidelines}.

\textbf{Model Policy for the Use of Controlled Substances for the Treatment of Pain}

\textbf{Section I: Preamble}\n
The (name of board) recognizes that principles of quality medical practice dictate that the people of the State of (name of state) have access to appropriate and effective pain relief. The appropriate application of up-to-date knowledge and treatment modalities can serve to improve the quality of life for those patients who suffer from pain as well as reduce the morbidity and costs associated with untreated or inappropriately treated pain. For the purposes of this policy, the inappropriate treatment of pain includes nontreatment, undertreatment, overtreatment, and the continued use of ineffective treatments.

The diagnosis and treatment of pain is integral to the practice of medicine. The Board encourages physicians to view pain management as a part of quality medical practice for all patients with pain, acute or chronic, and it is especially urgent for patients who experience pain as a result of terminal illness. All physicians should become knowledgeable about assessing patients’ pain and effective methods of pain treatment, as well as statutory requirements for prescribing controlled substances. Accordingly, this policy have been developed to clarify the Board’s position on pain control, particularly as related to the use of controlled substances, to alleviate physician uncertainty and to encourage better pain management.

Inappropriate pain treatment may result from physicians’ lack of knowledge about pain management. Fears of investigation or sanction by federal, state and local agencies may also result in inappropriate treatment of pain. Appropriate pain management is the treating physician’s responsibility. As such, the Board will consider the inappropriate treatment of pain to be a departure from standards of practice and will
investigate such allegations, recognizing that some types of pain cannot be completely relieved, and taking into account whether the treatment is appropriate for the diagnosis.

The Board recognizes that controlled substances including opioid analgesics may be essential in the treatment of acute pain due to trauma or surgery and chronic pain, whether due to cancer or non-cancer origins. The Board will refer to current clinical practice guidelines and expert review in approaching cases involving management of pain. The medical management of pain should consider current clinical knowledge and scientific research and the use of pharmacologic and non-pharmacologic modalities according to the judgment of the physician. Pain should be assessed and treated promptly, and the quantity and frequency of doses should be adjusted according to the intensity, duration of the pain, and treatment outcomes. Physicians should recognize that tolerance and physical dependence are normal consequences of sustained use of opioid analgesics and are not the same as addiction.

The (name of board) is obligated under the laws of the State of (name of state) to protect the public health and safety. The Board recognizes that the use of opioid analgesics for other than legitimate medical purposes pose a threat to the individual and society and that the inappropriate prescribing of controlled substances, including opioid analgesics, may lead to drug diversion and abuse by individuals who seek them for other than legitimate medical use. Accordingly, the Board expects that physicians incorporate safeguards into their practices to minimize the potential for the abuse and diversion of controlled substances.

Physicians should not fear disciplinary action from the Board for ordering, prescribing, dispensing or administering controlled substances, including opioid analgesics, for a legitimate medical purpose and in the course of professional practice. The Board will consider prescribing, ordering, dispensing or administering controlled substances for pain to be for a legitimate medical purpose if based on sound clinical judgment. All such prescribing must be based on clear documentation of unrelieved pain. To be within the usual course of professional practice, a physician-patient relationship must exist and the prescribing should be based on a diagnosis and documentation of unrelieved pain. Compliance with applicable state or federal law is required.

The Board will judge the validity of the physician’s treatment of the patient based on available documentation, rather than solely on the quantity and duration of medication administration. The goal is to control the patient’s pain while effectively addressing other aspects of the patient’s functioning, including physical, psychological, social and work-related factors.

Allegations of inappropriate pain management will be evaluated on an individual basis. The board will not take disciplinary action against a physician for deviating from this policy when contemporaneous medical records document reasonable cause for deviation. The physician’s conduct will be evaluated to a great extent by the outcome of pain treatment, recognizing that some types of pain cannot be completely relieved, and by taking into account whether the drug used is appropriate for the diagnosis, as well as improvement in patient functioning and/or quality of life.

Section II: Guidelines
The Board has adopted the following criteria when evaluating the physician’s treatment of pain, including the use of controlled substances:

Evaluation of the Patient—A medical history and physical examination must be obtained, evaluated, and documented in the medical record. The medical record should document the nature and intensity of the pain, current and past treatments for pain, underlying or coexisting diseases or conditions, the effect of the pain on physical and psychological function, and history of substance abuse. The medical record also should document the presence of one or more recognized medical indications for the use of a controlled substance.
**Treatment Plan**—The written treatment plan should state objectives that will be used to determine treatment success, such as pain relief and improved physical and psychosocial function, and should indicate if any further diagnostic evaluations or other treatments are planned. After treatment begins, the physician should adjust drug therapy to the individual medical needs of each patient. Other treatment modalities or a rehabilitation program may be necessary depending on the etiology of the pain and the extent to which the pain is associated with physical and psychosocial impairment.

**Informed Consent and Agreement for Treatment**—The physician should discuss the risks and benefits of the use of controlled substances with the patient, persons designated by the patient or with the patient’s surrogate or guardian if the patient is without medical decision-making capacity. The patient should receive prescriptions from one physician and one pharmacy whenever possible. If the patient is at high risk for medication abuse or has a history of substance abuse, the physician should consider the use of a written agreement between physician and patient outlining patient responsibilities, including

- urine/serum medication levels screening when requested;
- number and frequency of all prescription refills; and
- reasons for which drug therapy may be discontinued (e.g., violation of agreement).

**Periodic Review**—The physician should periodically review the course of pain treatment and any new information about the etiology of the pain or the patient’s state of health. Continuation or modification of controlled substances for pain management therapy depends on the physician’s evaluation of progress toward treatment objectives. Satisfactory response to treatment may be indicated by the patient’s decreased pain, increased level of function, or improved quality of life. Objective evidence of improved or diminished function should be monitored and information from family members or other caregivers should be considered in determining the patient’s response to treatment. If the patient’s progress is unsatisfactory, the physician should assess the appropriateness of continued use of the current treatment plan and consider the use of other therapeutic modalities.

**Consultation**—The physician should be willing to refer the patient as necessary for additional evaluation and treatment in order to achieve treatment objectives. Special attention should be given to those patients with pain who are at risk for medication misuse, abuse or diversion. The management of pain in patients with a history of substance abuse or with a comorbid psychiatric disorder may require extra care, monitoring, documentation and consultation with or referral to an expert in the management of such patients.

**Medical Records**—The physician should keep accurate and complete records to include

1. the medical history and physical examination,
2. diagnostic, therapeutic and laboratory results,
3. evaluations and consultations,
4. treatment objectives,
5. discussion of risks and benefits,
6. informed consent,
7. treatments,
8. medications (including date, type, dosage and quantity prescribed),
9. instructions and agreements and
10. periodic reviews.

Records should remain current and be maintained in an accessible manner and readily available for review.

**Compliance With Controlled Substances Laws and Regulations**—To prescribe, dispense or administer controlled substances, the physician must be licensed in the state and comply with applicable federal and
state regulations. Physicians are referred to the Physicians Manual of the U.S. Drug Enforcement Administration and (any relevant documents issued by the state medical board) for specific rules governing controlled substances as well as applicable state regulations.

Section III: Definitions
For the purposes of these guidelines, the following terms are defined as follows:

**Acute Pain**—Acute pain is the normal, predicted physiological response to a noxious chemical, thermal or mechanical stimulus and typically is associated with invasive procedures, trauma and disease. It is generally time-limited.

**Addiction**—Addiction is a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations. It is characterized by behaviors that include the following: impaired control over drug use, craving, compulsive use, and continued use despite harm. Physical dependence and tolerance are normal physiological consequences of extended opioid therapy for pain and are not the same as addiction.

**Chronic Pain**—Chronic pain is a state in which pain persists beyond the usual course of an acute disease or healing of an injury, or that may or may not be associated with an acute or chronic pathologic process that causes continuous or intermittent pain over months or years.

**Pain**—An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

**Physical Dependence**—Physical dependence is a state of adaptation that is manifested by drug class-specific signs and symptoms that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist. Physical dependence, by itself, does not equate with addiction.

**Pseudoaddiction**—The iatrogenic syndrome resulting from the misinterpretation of relief seeking behaviors as though they are drug-seeking behaviors that are commonly seen with addiction. The relief seeking behaviors resolve upon institution of effective analgesic therapy.

**Substance Abuse**—Substance abuse is the use of any substance(s) for non-therapeutic purposes or use of medication for purposes other than those for which it is prescribed.

**Tolerance**—Tolerance is a physiologic state resulting from regular use of a drug in which an increased dosage is needed to produce a specific effect, or a reduced effect is observed with a constant dose over time. Tolerance may or may not be evident during opioid treatment and does not equate with addiction.