### PRINCIPLES OF PAIN MANAGEMENT: ADULT GUIDE

#### Assessment and Diagnosis

All patients should be screened for pain. Once identified, a complete assessment, including physical, emotional, and spiritual components is necessary to determine cause of pain and appropriate therapy.

**History:** Assess
- Onset, location, quality, intensity, temporal pattern, aggravating and alleviating factors, associated symptoms
- Characteristics of pain
- Previous methods of treatment
- Other medical and surgical conditions
- Substance use

**Psychosocial History:** Assess
- Depression, anxiety, PTSD, sleep pattern, suicide risk
- Impact on quality of life, ADL’s & performance status
- Patient, family, and caregiver’s cultural and spiritual beliefs
- Secondary gain: psychosocial/financial

**Assessment:**
- Order and evaluate appropriate diagnostic testing
- Evaluate pain on all patients using the 0-10 scale:
  - A. mild pain: 1-3
  - B. moderate: 4-7 (interferes with work or sleep)
  - C. severe: 8-10 (interferes with all activities)

#### Treatment

### Goals:
- Rx acute pain aggressively to avoid chronic pain
- Rx chronic pain thoughtfully and systematically
- Identify and address the cause of pain
- Maintain alertness, ability to function safely/ productively
- Allow emergence of emotions associated with pain
- Negotiate target pain level with patient

**Non-Pharmacological Therapy**
- Patient / Family Education
- Cognitive Behavioral Therapy; Supportive Counseling
- Chiropractic Care; Osteopathic Manipulation; Massage
- Physical Therapy/Exercise/Strength/Flexibility
- Cutaneous Stimulation: Ice, Heat
- Counterstimulation: TENS
- Acupuncture & Acupressure (trigger point Rx)
- Relaxation Techniques: Biofeedback, Music, Hydrobath
- Meditation, Prayer, Spiritual & Pastoral Support
- Visualization/Interactive Guided Imagery

**Pharmacological Therapy**
- Use WHO/AHCPR step care as “ramp” [See reverse side]
- Use adjuvant therapies prn [See reverse side]
- Avoid Demerol (meperidine)
- Use care with combinations (consider total consumption of APAP from multiple Rx and OTC sources)
- Use ONE short acting med for acute pain ex: meperidine
- Switch to ONE long acting med when pain stabilized
- Avoid multiple agents of similar duration

**For chronic moderate or severe pain:**
- Give baseline long acting med around the clock
- For breakthrough, give 10% of total daily dose as prn
- PRN interval: 1-2 h oral, and 30-60 min parenteral
- Adjust baseline upward daily by total amount of prns
- When converting from one opioid to another, reduce total dose by 1/3-1/2 to account for incomplete cross tolerance

**Adjunct Therapy/Anticipate side effects:**
- Prevent constipation: start senna, sorbitol
- Nausea: Tx with antiemetics or change meds
- Pruritus: Tx with antihistamines or change meds
- Myoclonus: Tx with benzodiazepine or change meds
- Mental impairment: avoid driving/hazardous situations until side effect profile stabilizes; reassess safety for self/others periodically

#### Management and Monitoring

**General**
- Reassess regularly
- Measure “5th vital sign” using tools (i.e. numeric scale, face scale); respond urgently to pain 8 or more
- Follow amount and duration of response
- Assess performance status
- Partner with patient/family in setting goals of care
- Balance function vs. complete absence of pain

**Referrals and Management**

**For acute pain:**
- Refer early to appropriate specialist or Pain Center, if diagnosis unclear or pain refractory to treatment

**For chronic pain:**
- Refer “difficult to treat” cases to MD with Palliative Care expertise: H/O substance abuse, neuropathic pain, rapidly escalating opioid doses
- Set realistic chronic care goals
- Transition from passive recipient to patient-directed management of therapies.

**For neuropathic Pain**
- Use anti-epilepsy drugs (AED’s) 1st
- Use step 2 or 3 drug to help Rx

#### SPECIAL SITUATIONS:

**Anxiety and depression**
- Refer to Depression Principles

**Verbally Noncommunicative Patients**
- Infants, children & cognitively impaired all feel pain
- Evaluate patient’s non-specific signs: noisy breathing, grinding teeth, bracing, rubbing, crying, agitation

**Elderly/ renal or hepatic disease**
- Start at ½ usual dose
- Watch carefully for toxicity from accumulation

**Patients with substance abuse history**
- May need higher starting dose (tolerance)
- Use prescribing contracts for outpatient use

**Be Aware of Potential for Addiction & Misuse**
- Encourage established functional goals
- Ensure follow-up

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Guidelines and principles are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines & principles should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs. Approved 5/ 15 /12;  Next Scheduled Update by 5/14
**Step 1: Treatment of Mild Pain (Score of 1-3)**

**Drug Class** | **Practical Considerations**
---|---
Acetaminophen (APAP) | NOT anti-inflammatory; maximum 4 grams/24 hours from all sources; leading cause of acute liver failure (including accidental overdose); monitor for severe liver injury & acute renal failure; potential for allergic reaction
Salicylates (ASA) | Inhibits platelet aggregation; possible post-op bleeding; hepatic/renal impairment; GI ulcers; increased risk of bleeding with warfarin; monitor level (150-300 mcg/ml)
Non-steroidal anti-inflammatory | Assess risk of nephrotoxicity, drug interactions, and GI toxicity prior to prescribing; administer with PPI if GI intolerance or high risk; topical agents may be appropriate for individuals unable to use oral therapy
Cox-2 anti-inflammatory | Caution in pts with cardiovascular disease or at risk for CV disease; avoid Celebrex with known suflia allergy; use if contraindication or severe intolerance to NSAID

**Step 2: Treatment of Moderate Pain (Score 4-7), pain not alleviated with medicine from Step 1, and/or if pain worsens**

**Drug Class** | **Practical Considerations**
---|---
Codeine /APAP: Oxycodone/ASA or APAP: Hydrocodone/APAP | Total dose limited by APAP (maximum 4 grams/24 hours); lower threshold for elderly; counsel about additive APAP in over-the-counter medications
Tramadol /Tramadol with APAP | Not 1st line; risk of seizures () risk with higher doses and combination with SSRIs/TCA; withdrawal symptoms can occur; risk of serotonin syndrome when combined with SSNRIs
Tapentadol | Dual mechanism – mu agonist/norepinephrine reuptake inhibitor; Risk of serotonin syndrome when combined with serotoninics drugs; Maximum dose: IR 600mg/day, ER 500mg/day

**Step 3: Opioid Treatment of Moderate – Severe Pain (Score 4-10), pain not alleviated with medicine from Step 2: Using Equianalgesic Dosing**

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>EQUIANALGESIC DOSE</th>
<th>PO USUAL STARTING DOSES for ADULT&gt;50kg* PARENTERAL</th>
<th>PO COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>10 mg</td>
<td>2.5-5 mg SC/IV q4-h (&lt; 1.25-2.5 mg)</td>
<td>IR tablets (15,30mg): Rectal suppository (5,10,20,30mg) Oral solution (2mg/ml, 4mg/ml): Concentrate (20mg/ml) can give buccally; Morphine ER tablets (15,30,60,100,200mg) q8-12h Kadian ER capsules (10,20,30,50,60,100,200mg) q2-4h Avanza ER capsules (30,45,60,75,90,100mg) q24h Not recommended in renal failure</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>Not Available</td>
<td>20 mg</td>
<td>IR capsule (5mg); IR tablet (5,10,15,20,30,30mg) Oral Solution (60mg/15ml): Concentrate (30mg/ml) Oxycodone (10,15,20,30,40,60,80mg) – To high cost and potential for abuse, use only if failure or contraindication to morphine sulfate ER APAP Combo – 2.5-10mg oxycodone combined with 325-650mg APAP: (combos generally not recommended) Ibuprofen combo and ASA combo also available (combos generally not recommended) Not enough literature regarding dosing in renal failure. Use caution.</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1.5 mg</td>
<td>0.2-0.6 mg SC/IV q2-3h (&lt; 0.2 mg)</td>
<td>Tablet (2.48mg): ER tablet (8, 12, 16mg): Oral liquid (1mg/ml): Suppository (3mg) Use carefully in renal failure</td>
</tr>
<tr>
<td>Methadone</td>
<td>2mg PO methadone = 1mg (see separate sheet with detail dosing information)</td>
<td>1/2 oral dose 24h morphine</td>
<td>Tablet (5.10mg): Solution (1mg/ml, 2mg/ml): Concentrate (10mg/ml) Usually 25ug or q8h; Long term 1/10. Acceptable with renal disease Small dose change makes big difference in blood levels; tends to accumulate with higher doses; always write “hold for sedation” Because of long half-life, do not use morphadone pm unless experienced Many drug interactions with commonly used medications When converting from oral to parenteral, cut dose in half for safety When converting from parenteral to oral, keep dose the same</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>100 mcg (single dose) 1/2 and duration of parenteral doses variable</td>
<td>24 hr oral Initial patch dose 12mcg/h 12.5mcg/hr 25mcg/hr 50mcg/hr 75mcg/hr 100mcg/hr</td>
<td>Transdermal patch 12 mcg/h Q24h (use with caution in opioid naive and in unstable patients because of 12 hour delay in onset and offset) Transdermal patch (12,25,50,75,100mcg) – To its high potency and potential for overdose or abuse, use only if failure or contraindication to morphine sulfate ER in primary care setting N.B. Incomplete cross-tolerance already accounted for in conversion to fentanyl when converting to other opioid from fentanyl, generally reduce the equipalgesic amount by 50% IV: very short acting; associated with chest wall rigidity. Acceptable in renal failure, monitor carefully if using long term. Buccal film (200-1200mcg), Buccal tablet (100-800mcg), Nasal solution (100 &amp; 400 mcg/ml), SL tablet (100-800mcg), Lozenges (200-1600mcg). Indicated for breakthrough cancer pain only</td>
</tr>
<tr>
<td>Codeine</td>
<td>130 mg</td>
<td>15-30 mg IM/SQ q4-h (&lt; 7.5-15 mg)</td>
<td>Tablet (15,30,60mg): Elixir: 12mg and 120mg APAP/56 mg Tylenol #3 (30mg w/ 300mg APAP): Tylenol #4 (60mg w/ 300mg APAP) Monitor total acetaminophen dose</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>Not Available</td>
<td>30 mg</td>
<td>Tablet – multiple brand and generic strengths ranging from 2.5-10mg combined with APAP: Elixir 2.5mg and 16mg APAP/56mg Tablet – with buprenorphine (7,500mcg) Monitor total acetaminophen or buprenorphine dose</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>1 mg</td>
<td>1-1.5 mg IM/SQ q4-h (&lt; 0.5 mg)</td>
<td>Tablet: IR: 5,10mg ER: 5,10,20,30, 40mg Use carefully in renal failure</td>
</tr>
</tbody>
</table>

* – ‘Usual starting doses’ apply to opioid naive patients, not for patients who have been on opioids and whose starting dose should take their usual consumption into account.

**Adjuvant Therapies**

<table>
<thead>
<tr>
<th>Therapeutic Class / Drug Name</th>
<th>Indication</th>
<th>Practical Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tricyclic antidepressants: amitriptyline, imipramine, nortriptyline, desipramine</td>
<td>Neuropathic pain and chronic pain</td>
<td>Anticholinergic effects, elderly more sensitive to adverse effects, use cautiously with comorbid C/V disease</td>
</tr>
<tr>
<td>Other antidepressants: clomipramine, sertraline, fluoxetine, venlafaxine, duloxetine</td>
<td>Neuropathic pain and depression</td>
<td>May increase bleeding risk especially if combined with ASA or NSAIDs; taper dose prior to discontinuing</td>
</tr>
<tr>
<td>Anti-epileptics: gabapentin, phenytoin, carbamazepine, pregabalin, topiramate</td>
<td>Neuropathic pain</td>
<td>Numerous drug interactions (except minimal for gabapentin and Lyrica)</td>
</tr>
<tr>
<td>Benzodiazepines: diazepam, lorazepam</td>
<td>Skeletal muscle spasm, akathisia</td>
<td>Monitor for CNS/respiratory depression; do not stop abruptly; contraindicated in pts with narrow angle glaucoma</td>
</tr>
<tr>
<td>Anti-muscle spastics: baclofen, cyclobenzaprine, methocarbamol</td>
<td>Muscle spasm</td>
<td>Recommended short term use for relief of acute pain; avoid in the elderly due to limited efficacy and adverse effects</td>
</tr>
<tr>
<td>Topical agents: lidocaine patch, gel</td>
<td>Localized Neuropathic pain</td>
<td>Monitor for rash or skin irritation; need to be aware of systemic absorption and maximum dosing limits</td>
</tr>
<tr>
<td>Topical agents: capsaicin cream or lotion (OTC)</td>
<td>Neuropathic pain, muscle/joint pain</td>
<td>Regular and frequent administration is essential, can cause burning sensation which is intolerable to some</td>
</tr>
</tbody>
</table>