


PRINCIPLES OF PAIN MANAGEMENT: ADULT GUIDE

Assessment and Diagnosis	Treatment	Management and Monitoring
<p>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.</p> <p>History: Assess</p> <ul style="list-style-type: none"> 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 <p>Psychosocial History: Assess</p> <ul style="list-style-type: none"> 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 <p>Assessment:</p> <ul style="list-style-type: none"> Order and evaluate appropriate diagnostic testing Evaluate pain on all patients using the 0-10 scale: <ul style="list-style-type: none"> A. mild pain: 1-3 B. moderate: 4-7 (interferes with work or sleep**) C. severe: 8-10 (interferes with all activities***) <div style="text-align: center; border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>FACES PAIN SCALE-REVISED</p> <p>CHOOSE THE FACE THAT BEST DESCRIBES HOW YOU FEEL</p>  <p>0 No Hurt 2 Hurts Little Bit 4 Hurts Little More 6 Hurts Even More 8 Hurts Whole Lot 10 Hurts Worst</p> <p><small>From Hicks CL, von Baeyer CL, Spafford P, van Korlaar I, Goodenough B. Faces Pain Scale-Revised: Toward a Common Metric in Pediatric Pain Measurement. PAIN 2001; 93:173-183. This figure has been reproduced with permission of the International Association for the Study of Pain® (IASP®). The figure may not be reproduced for any other purpose without permission.</small></p> </div> <p>Diagnostic Terms:</p> <ul style="list-style-type: none"> *Somatic pain: localized; ache, throb, or gnaw *Visceral pain: often referred; cramp, pressure, deep ache, squeeze *Neuropathic pain: burns, electric shock, hot, stab, numb, itch, tingle Cancer pain: associated with cancer, HIV Non-cancer pain: e.g. arthritis or musculoskeletal disorders Acute Pain: ↑HR, HBP, diaphoresis, pallor, fear, anxiety Chronic pain: sleep difficulties, loss of appetite, psychomotor retardation, depression, career/relationship change <p><i>** interferes with work or sleep, *** interferes with all activities</i></p>	<p>Treatment</p> <p>Goals:</p> <ul style="list-style-type: none"> 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 <p>Non-Pharmacological Therapy</p> <ul style="list-style-type: none"> 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 <p>Pharmacological Therapy:</p> <ul style="list-style-type: none"> Use WHO/AHCP step care as "ramp" [See pg.2] Use adjuvant therapies prn [See pg.2] Avoid Demerol® (meperidine) & Darvon® (propoxyphene) Use care with combinations (acetaminophen/ASA) Use short acting meds for acute pain exacerbation Switch to long acting meds when pain stabilized <p>For chronic moderate or severe pain:</p> <ul style="list-style-type: none"> 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 <p>Anticipate side effects:</p> <ul style="list-style-type: none"> Prevent constipation: start senna, sorbitol Mental impairment: avoid driving/hazardous situations until side effect profile stabilizes; reassess safety for self/others periodically Nausea: Rx with antiemetics or change meds Pruritus: Rx with antihistamines or change meds Myoclonus: Rx with benzodiazepine or change meds 	<p>Management and Monitoring</p> <p>General</p> <ul style="list-style-type: none"> 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 <p>Acute Pain</p> <ul style="list-style-type: none"> Refer early to appropriate specialist or Pain Center, if diagnosis unclear or pain refractory to treatment <p>Chronic, "Non-cancer" Pain</p> <ul style="list-style-type: none"> Set realistic chronic care goals Transition from passive recipient to patient-directed management of therapies. <p>"Cancer" Pain</p> <ul style="list-style-type: none"> Refer "difficult to treat" cases to MD with Palliative Care expertise: H/O substance abuse, neuropathic pain, rapidly escalating opioid doses <p>Neuropathic Pain</p> <ul style="list-style-type: none"> Use anti-epilepsy drugs (AED's) first Use step 2 or 3 drug to help Rx <p>SPECIAL SITUATIONS:</p> <p>Anxiety and depression</p> <ul style="list-style-type: none"> Refer to Depression Principles <p>Verbally Noncommunicative Patients</p> <ul style="list-style-type: none"> Infants, children & cognitively impaired all feel pain Evaluate patient's non-specific signs: noisy breathing, grinding teeth, bracing, rubbing, crying, agitation <p>Elderly/ renal or hepatic disease</p> <ul style="list-style-type: none"> Start at ½ usual dose Watch carefully for toxicity from accumulation <p>Patients with substance abuse history</p> <ul style="list-style-type: none"> May need higher starting dose (tolerance) Use prescribing contracts for outpatient use N.B. Addiction is very rare when opioids are used for pain in patients with no prior history of substance abuse

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Step 1: Treatment of Mild Pain (Score of 1-3)

Drug Class	Practical Considerations
Acetaminophen (APAP)	NOT anti-inflammatory; excess alcohol intake risks hepatotoxicity; possible interaction with warfarin; maximum 4 grams/24 hours from all sources
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	Can increase likelihood of renal impairment in pts with HTN or CHF; take with food; most are inexpensive; administer with PPI (omeprazole) if mild stomach upset occurs; avoid long term use
Cox-2 anti-inflammatory	Caution in pts with cardiovascular disease or at risk for CV disease; avoid Celebrex with known sulfa 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 1 st line; risk of seizures (↑ risk with higher doses and combination with SSRI/TCA); withdrawal symptoms can occur; risk of serotonin syndrome when combined with SSRIs

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

MEDICATION	GENERIC / BRAND (Cost)	EQUIANALGESIC DOSE		USUAL STARTING DOSES for ADULT>50kg ^a		COMMENTS
		IM/IV (onset 15-30 min)	PO (onset 30-60 min)	PARENTERAL ♦ ½ dose for elderly, or severe renal or liver disease	PO	
Morphine	Generic - \$ - \$\$ Brand - \$\$\$ - \$\$\$\$	10 mg	30 mg	2.5-5 mg SC/IV q3-4h (♦ 1.25-2.5 mg)	5-15 mg q3-4h IR or oral solution (♦ 2.5-7.5 mg)	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 (10,20,30,50,60,80,100,200mg) q12-24h Avinza ER capsules (30,45,60,75,90,120mg) Q24h Not recommended in renal failure
Oxycodone	ER Brand - \$\$\$\$ IR Generic - \$ - \$\$ APAP combo - \$ - \$\$	Not Available	20 mg	Not Available	5-10 mg q3-4h IR or oral solution (♦ 2.5 mg)	IR capsule (5mg); IR tablet (5,10,15,20,30mg) Solution (5mg/5ml); Concentrate (20mg/ml) Oxycontin (10,15,20,30,40,60,80mg) – Due to high cost and potential for abuse, use only if failure or contraindication to morphine sulfates ER APAP Combo - 2.5–10mg oxycodone combined with 325–650mg APAP; Ibuprofen combo and ASA combo also available Not enough literature regarding dosing in renal failure. Use caution.
Hydromorphone	Generic - \$ Brand - \$\$	1.5 mg	7.5 mg	0.2-0.6 mg SC/IV q2-3h (♦ 0.2 mg)	1-2 mg q3-4h (♦ 0.5-1 mg)	Tablet (2,4,8mg); Oral liquid (1mg/ml), Suppository (3mg) Use carefully in renal failure
Methadone (see separate sheet with detail dosing information)	Generic - \$ Brand - \$	1/2 oral dose 2mg PO methadone = 1mg parenteral methadone	24 hr oral morphine <30mg 2:1 31-99mg 4:1 100-299mg 8:1 300-499mg 12:1 500-999mg 15:1 1000-1200mg 20:1 > 1200mg Consider consult	1.25-2.5 mg q8h (♦1.25 mg)	2.5-5 mg q8h (♦1.25-2.5 mg)	Tablet (5,10mg) Solution (1mg/ml, 2mg/ml & concentrated 10mg/ml) Usually q12h or q8h; Long variable T½; Acceptable with renal disease Small dose change makes big difference in blood level; tends to accumulate with higher doses; always write "hold for sedation" 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
Fentanyl	Patch Generic - \$\$ - \$\$\$ Brand - \$\$\$\$ Oral Generic - \$\$\$ - \$\$\$\$ Brand - \$\$\$ - \$\$\$\$	100 mcg (single dose) t ½ and duration of parenteral doses variable	24 hr oral MS dose 30-59mg 12mcg/hr 60-134mg 25mcg/hr 135-224mg 50mcg/hr 225-314mg 75mcg/hr 315-404mg 100mcg/hr	Initial patch dose 25-50 mcg IM/IV q1-3h (♦ 12.5-25 mcg)	Transdermal patch 12 mcg/hr Q72h (use with caution in opioid naïve and in unstable patients because of 12 hour delay in onset and offset)	Transdermal patch (12,25,50,75,100mcg) – Because of its high potency and potential for overdose or abuse, use only if failure or contraindication to morphine sulfate ER in the 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 equianalgesic amount by 50% IV: very short acting; associated with chest wall rigidity. Oral lozenge (200mcg to start) and buccal tablet (100mcg start) indicated for breakthrough cancer pain only Acceptable in renal failure, monitor carefully if using long term.
Codeine	Generic - \$ APAP combo - \$\$	130mg	200 mg	15-30 mg IM/SC q4h (♦ 7.5-15 mg) IV contraindicated	30-60 mg q3-4h (♦ 15-30 mg)	Tablet (15,30,60mg); Elixir 12mg and 120mg APAP/5ml Tylenol #3 (30mg w/ 300mg APAP); Tylenol #4 (60mg w/ 300mg APAP) Monitor total acetaminophen dose
Hydrocodone	Generic - \$ Brand - \$\$ - \$\$\$	Not Available	30 mg	Not Available	5 mg q3-4h (♦ 2.5 mg)	Tablet – multiple brand and generic strengths ranging from 2.5-10mg combined with 300-750mg APAP; Elixir 2.5mg and 167mg APAP/5ml Tablet – with ibuprofen (7.5/200mg) Monitor total acetaminophen or ibuprofen dose

^a – “Usual starting doses” apply to opioid naïve patients, not for patients who have been on opioids and whose starting dose should take their usual consumption into account.

^b – Pricing accurate as of 2/10 for equianalgesic dosing of an average 30 day supply (\$ = \$1-\$50 \$\$=\$50-\$100 \$\$\$=\$100-\$400 \$\$\$\$=>\$400 / month)

Adjuvant Therapies

Therapeutic Class / Drug Name	Indication	Contraindications
Tricyclic antidepressants: amitriptyline, imipramine, nortriptyline, desipramine	Neuropathic pain and chronic pain	Use of MAO Inhibitor in the past 14 days; prolonged QRS; narrow-angle glaucoma
Other antidepressants: citalopram, sertraline, paroxetine, fluoxetine, Cymbalta (duloxetine)	Neuropathic pain and depression	Use of MAO Inhibitor in the past 14 days
Anti-epilepsy: gabapentin, phenytoin, carbamazepine, Lyrica (pregabalin), oxcarbazepine	Neuropathic pain	Numerous drug interactions (except minimal for gabapentin and Lyrica)
Benzodiazepines: diazepam, lorazepam	Skeletal muscle spasm, akathisia	Patients with CNS/respiratory depression; narrow-angle glaucoma
Anti-muscle spasticity: baclofen, cyclobenzaprine, methocarbamol	Muscle spasm	Use of MAO Inhibitor in the past 14 days (for cyclobenzaprine only)
Anesthetics: Lidoderm patch	Dermal neuropathic pain	Known history of sensitivity to local anesthetics of the amide type