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Pain Management Reference Guide

Principles of Pain Management for Adults

1. Goals of pain management are to develop realistic expectations for pain relief with patient/family, improve function, minimize pain, & enhance quality of life
2. Ask the patient about the presence of pain
3. Accept the patient's report of pain
4. Assess the pain including:
 - Is pain acute, chronic or mixed? Is it intermittent or continuous?
 - Location, onset, duration, intensity (see pain assessment tools), quality, effect on function & quality of life, alleviating and aggravating factors, patient's goal, response to prior treatment;
 - History of pain course, physical examination, diagnostic tests
 - Assessment may vary in pediatric, geriatric, &/or cognitively impaired patients
5. Assess psychosocial factors: pre-existing psychiatric illness &/or depression/anxiety as a result of pain, history of substance abuse, family & social support
6. Monitor outcomes & document the 4 A's (Passik, 2002)
 - Analgesia
 - Activities of Daily Living (ADLs)
 - Adverse effects (side effects)
 - Aberrant behavior (compulsive use, loss of control, use despite harm & diversion)
7. For outpatient practitioners use the following for pain goal setting (5-Rs & E): Reasonable, Reachable, Recorded, Revisted, Revised, Exit Strategy
8. If possible, determine the cause or mechanisms of the pain (inflammatory, neuropathic, visceral, myofacial)
9. Use an interdisciplinary, multi-drug, multimodal approach & consider patient preferences
10. Treat persistent pain with scheduled medications
11. Assess, anticipate & manage side effects
12. Educate regarding safe use of medications, side effects & management, when & how to report uncontrolled pain to healthcare provider.
13. Reassess, reexamine, & readjust treatment plan until pain is adequately controlled.
14. Change pain medication if side effects unmanageable
15. Avoid intramuscular route & use oral route if possible
16. Avoid meperidine & propoxyphene due to potential neurotoxicity, especially in the elderly
17. With geriatric patients, start doses low & titrate slowly

Opioid Equianalgesic Table

Opioid	Equianalgesic Dose		Starting Dose in Opioid Naive Patients (PRN)*
	Oral (mg)	IV(mg)	
Morphine	30	10	15 mg PO Q 4h
Hydromorphone	7.5	1.5	2-4 mg PO Q 3h
Oxycodone	20-30	---	5-10 mg PO Q 4h
Oxymorphone	10	1	5-10 mg PO Q 4h
Hydrocodone	30	---	5-10 mg PO Q 4h
Transdermal Fentanyl	See package insert: 60-134 mg/d of PO morphine approx 25 mcg/h patch		Not recommended
Methadone	variable		2.5-5 mg PO Q 8-12 h

*Immediate release opioids starting dose

Please refer to a drug information source for further information on available formulations, side effects, precautions, and contraindications.

Switching From One Opioid to Another

1. To make equianalgesic conversions use the following information:

$$\text{New Opioid Dose (24 hr mg amount)} = \frac{\text{Current Opioid (24 hr mg amount)} \times \text{New Opioid Equianalgesic Potency}}{\text{Current Opioid Equianalgesic Potency}}$$

2. Sum the past 24-hour requirement of the current opioid(s) being used.
 - a. List all opioids the patient has taken in past 24 hrs
 - b. List all parenteral opioids patient has taken in past 24 hrs
3. Set up equianalgesic equations for all listed in #2 (oral & parenteral opioids) using the known numbers:
 - a. The Current Opioid Dose (24 hr mg amount)
 - b. The Current Opioid Equianalgesic Potency
 - c. The New Opioid Equianalgesic Potency
4. Calculate for the total New Opioid Dose (24 hr mg amount)
5. Reduce calculated dose of new opioid by 25-50% for incomplete cross tolerance, titrating up as needed.
6. Divide this New Opioid Dose by the number of doses to be given per day based on route and duration of action of the medication
7. Use short-acting opioid (rescue) dose for breakthrough or incident pain, when using long-acting opioid for persistent pain
 - a. The rescue is 10-15% of the oral 24 hr total daily dose
 - b. Schedule PRN rescue doses according to duration of action
 - c. If patient is using more than 3 rescue doses a day, consider increasing the long-acting dose
 - d. Individualize choice of PRN opioid
 - e. Recalculate PRN doses if the long-acting dose(s) are increased or decreased.

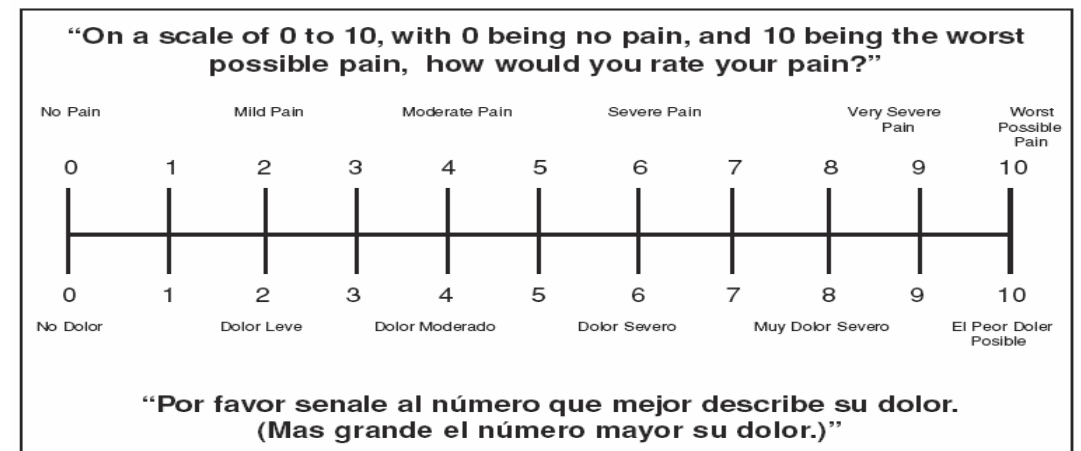
Management of Opioid Side Effects

Side Effect	Management Considerations
Constipation	Begin bowel regimen when opioid is initiated; provide a mild stimulant (e.g. senna, Miralax) plus a stool softener (e.g. Colace). Ensure adequate hydration & avoid bulking laxatives.
Myoclonic Jerking	Consider clonazepam; dose reduction; or opioid rotation; consider hydration
Nausea/Vomiting	Consider prochlorperazine, promethazine, metoclopramide, Dose reduction, opioid rotation. (Tolerance to side effect may develop within first week)
Pruritus	Consider antihistamine, dose reduction, or opioid rotation
Respiratory Depression	Sedation often precedes respiratory depression. Hold opioid & sedating medications. If RR < 8/min, administer diluted naloxone (1 ml of 0.4mg/ml in 9 ml normal saline – 0.04 mg/ml), 2 ml every 2 minutes until respiratory status is stable.
Sedation	Tolerance often develops. Hold sedating medications; consider dose reduction & CNS stimulants (e.g. caffeine, modafinil, methphenidate)
Suspected Opioid Hyperalgesia	Consider opioid rotation or dose reduction

For references go to the FPI website: www.floridapain.org

Assessment Tools

NUMERIC RATING SCALE – SIMPLE DESCRIPTOR PAIN SCALE



Disclaimer: This pain reference guide is intended to serve the user as a brief summary of commonly used analgesics & is not a complete pain reference resource. All medications should be ordered by physicians or licensed physician extenders. Reviewers and publishers are not responsible for the continued currency of the information or for accuracy, any omissions, the application of this information, or the consequences arising from. No official endorsement by any federal agency or pharmaceutical company is intended or inferred.

Made possible by a grant from Endo Pharmaceuticals

Commonly Used Non-Opioids & Commonly Used Co-Analgesics: When dosing, consider age, comorbidities, concomitant medications, renal & hepatic insufficiencies

Drug	Dose Range	Dosing Interval	Maximum Dose in 24 hours	Comments/Common side effects
Acetaminophen (APAP)	500-1,000 mg PO	Q 4-6 h	3,250-4,000 mg	Rectal suppository and sustained-release preparation available; potential liver toxicity with chronic use; 2000 mg/d max with warfarin & in elderly
Aspirin	500-1,000 mg PO	Q 4-6 h	4,000 mg	Rectal suppository available & sustained-release preparation available**
Celecoxib	200-400 mg PO	Q 12-24 h	400 mg	Contraindicated in sulfonamide allergy, may have decreased platelet effects; risk of cardiovascular events w/ chronic use; lower incidence of adverse GI effects & renal toxicity**
Choline Magnesium Trisalicylate	1,000-1,500 mg PO	Q 2 h	2,000-3,000 mg	Lower incidence of GI bleeding, minimal anti-platelet activity**
Diclofenac	25-75 mg PO	TID	150-225 mg	Available as gel (Voltaren) or patch (Flector) with minimal systemic absorption**
Ibuprofen	200-400 mg PO	Q 4-6 h	2,400-3200 mg	Caution with severe hepatic dysfunction, diabetes, & gout**
Indomethacin	25-50 mg PO	BID-TID	200 mg	FDA approved for OA, RA, may be useful as migraine abortive**
Naproxen	275-550 mg PO	Q 6-8 h	1,500 mg	May cause peptic ulcers, constipation, heartburn, abdominal pain, nausea, headache, dizziness, pruritis, rash (discontinue if occurs), tinnitus or edema**
Ketoprofen	25-50 mg PO	Q 6-8 h	300 mg	Constipation; diarrhea; dizziness; drowsiness; gas; headache; nausea; stomach upset**
Ketorolac	15-60 mg IV	Q 6 h	120 mg	Recommended to use for no longer than 5 days; in elderly, consider using 15 mg IV dose**
Nabumetone	500-1000 mg PO	Q 8-12 h	2,000 mg	May cause nausea, constipation, & itching**

**Monitor closely for common adverse effects: GI irritation, ulceration & bleeding; renal toxicity & decreased platelet aggregation.

Drug	Uses	Starting Dose	Dose Range	Comments
Antidepressants				
Tricyclic Antidepressants (TCAs)				
Amitriptyline (Elavil)	Neuropathic pain	10-25 mg PO QHS	50-150 mg PO QHS	Anticholinergic side effects, QT prolongation, titrate weekly; caution in elderly patients; doses may be divided into TID-QID dosing
Desipramine		10-25 mg PO QHS	50-150 mg PO QHS	
Nortriptyline		10-25 mg PO QHS	30-60 mg PO QHS, max 150 mg	
Selective Serotonin & Norepinephrine Reuptake Inhibitor (SNRI) Antidepressants				
Duloxetine (Cymbalta)	Neuropathic pain	20-30 mg PO daily	60 mg PO daily	Titrate weekly by 20-30 mg as tolerated; FDA indicated for diabetic peripheral neuropathy & fibromyalgia
Milnacipran (Savella)		12.5 mg PO daily	50 mg PO BID, max 200 mg/d	12.5 mg on day 1, 12.5 mg BID on day 2-3, 25 mg BID days 4-7; FDA indication for fibromyalgia
Venlafaxine (Effexor, Effexor XR)		75 mg PO daily	150-225 mg/d	Divide doses BID-TID for regular release; daily for XR; titrate by 75 mg Q 4 days
Weak μ-agonist & Norepinephrine &/or Serotonin Reuptake Inhibitor				
Tapentadol (NuCynta)	Neuropathic, somatic or visceral	50-100 mg PO Q 4h	Max 600 mg/d	Predominantly NE reuptake inhibition & minimal 5-HT reuptake inhibition; caution in pt w/ seizure history
Tramadol (Ultram)		50-100 mg PO Q 6h	Max 400 mg/d, 300 mg if >75 yo	NE & 5-HT reuptake inhibition; caution in pt w/seizure history
Antiepileptics				
Gabapentin (Neurontin)	Neuropathic pain	100-300 mg PO TID	300-1200 mg PO TID	Titrate weekly; saturable GI absorption-less absorbed as dose increased; FDA indicated for postherpetic neuralgia
Lamotrigine (Lamictal)		25 mg PO daily	100-200 mg PO BID	Refer to package insert for titration; titrate slowly & monitor for rash- Steven Johnson's syndrome rare-- rash generally begins inside the mouth
Pregabalin (Lyrica)		50-75 mg PO BID-TID	75-150 mg PO BID, max 600 mg/d	Titrate weekly; onset faster than gabapentin; FDA indicated for diabetic peripheral neuropathy, postherpetic neuralgia, & fibromyalgia
Corticosteroids				
Dexamethasone (Decadron)	Somatic or visceral pain	4 mg PO/IV BID	12-20 mg/d PO/IV in divided doses	Useful in bone pain; prednisone used short-term in rheumatoid arthritis; monitor for adrenal insufficiency; taper off if used > 7 days
Prednisone		5 mg PO daily	10-50 mg/d	
Local Anesthetic				
Lidocaine 5% Patch (Lidoderm)	Somatic or neuropathic pain	1 patch 12 hours on/12 hours off	1-3 patches for 12 hours on/ 12 hours off daily	Do not use on broken skin or w/ heating pad; may cut patch; minimal systemic absorption
Antispasmodics/ Skeletal Muscle Relaxants				
Baclofen	Muscle spasms, central spasticity, somatic/myofascial or visceral pain	5-10 mg PO TID	10-20 mg PO TID, max 80 mg/d	Best choice for central spasticity; titrate by 5-15 mg Q 3 days
Cyclobenzaprine (Flexeril)		5-10 mg PO TID	5-10 mg PO TID, max 30 mg/d	Anticholinergic side effects; caution in elderly; general CNS depressant
Tizanidine (Zanaflex)		2-4 mg PO TID	4-8 mg PO TID, max 36 mg/d	May cause hypotension; administer tablet without food, capsule with food if sedated