Treatment of Common Analgesic Side Effects

**Constipation (Most Common Side Effect of Opioids)**

1. Ensure adequate water intake/hydration
2. Correct electrolyte abnormalities
3. Stool Softener: Docusate Na (Colace®) 100 mg or Docusate Ca (Surfak®) 240 mg (oral only), po daily
4. Cathartic: Bisacodyl (Dulcolax®) 10 mg po q hs
5. Osmotic agent: Lactulose 30-60 ml or sorbitol 30 ml po daily
6. Enema: Milk of Magnesia 30-60ml po daily

**Shands’ Pain Management Policy**

Pain level is assessed & documented on admission, daily or every shift and as needed.

**Respiratory Depression**

- Naloxone (Narcan) 0.2 mg IV every 2-3 min qm

**Nursing Implications**

- Use the standardized numeric pain scale as depicted below.
- For neonates & infants the Neonatal Infant Pain Scale (NIPS), as shown below is used to assess pain level.
- For pediatric patients or cognitively impaired patients the “Wong Baker Faces Scale” as shown below is used to assess pain level.

**Pharmacotherapeutic Principles**

**Somatic-nociceptive pain:**
- Associated with tissue damage. Aching, sharp (e.g., post-op, traumatic)

**Neuropathic pain:**
- Altered nerve transmission. Burning, tingling, numbness (e.g., neuropathies)
  1. Treat mild-moderate somatic-nociceptive pain with acetaminophen or NSAID unless specifically contraindicated
  2. Add opioid for moderate-severe pain
  3. Add adjuvant to treat side effects or increase analgesia
  4. A-T-C or ER dosing for continuous pain
  5. Short acting opioid for breakthrough pain
  6. Treat mild-moderate neuropathic pain with TCA or SNRI and an antiepileptic
  7. Add opioid for mod-severe neuropathic pain

**Analgesic Ladder**

1. **Mild Pain**
   - NSAID/APAP
   - Docusate Na (Colace®) 100 mg or Docusate Ca (Surfak®) 240 mg (oral only), po daily
   - Milk of Magnesia 30-60ml po daily
2. **Mild Mod-Opioid**
   - NSAID/APAP
   - Add adjuvant to treat side effects or increase analgesia
3. **Moderate Pain**
   - NSAID/APAP
   - AED + / - Tramadol
4. **Moderate Pain**
   - NSAID/APAP
   - AED + / - Tramadol
5. **Severe Pain**
   - NSAID/APAP
   - AED + / - Tramadol
6. **Strong Opioid**
   - NSAID/APAP
   - AED + / - Tramadol

**Sample PCA Orders - Adult**

1. Solution: morphine 1mg/ml
2. Basal Rate: 0mg/h for first 24 hours after which may add 1mg/h
3. Loading dose 1-3 mg as a 1 time dose
4. Patient administered dose (demand dose): 0.1-5mg
5. Lock out interval: 5-10 minutes (typically 6 minutes)
6. 4 Hr Limit: 0.1-30mg (typically 10mg)
7. Monitor BP, HR, O2 sat every 30m x2, every 1h x3, then every 4 hours - repeat with change of dose or infusion rates
8. Monitor pain on numeric pain scale (NPS) every 4 hours or sooner
   - If pain consistently rate >4/10 increase demand dose by 0.2 mg q4h x3 pm. If pain still is not controlled, consult pain team.
9. Monitor sedation scale and RR every 1h x4 then every 2h – repeat with change of dose or infusion rates
   - For RR <12 or sedation scale >3: notify team
   - For RR >10 and/or sedation scale >3; stop PCA, call team, and give naloxone 0.2mg IV push
10. For pruritus: Diphenhydramine 25-50 mg IV/IM every 6h pm
11. For nausea/vomiting: Ondansetron 4mg IV q6h pm
12. Do not administer any other opioid analgesics unless specifically approved by the physician.

For more pain management guidelines, consults:

http://intrashands1.umc.ufl.edu/dept/painmanagement/painmgmt.asp
<table>
<thead>
<tr>
<th>Generic</th>
<th>Trade Name</th>
<th>Adult</th>
<th>Pediatric</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen APAP</td>
<td>Tylenol</td>
<td>325-650mg po/pr q4h Max: 4g/daily (2g/daily if liver dysfunction)</td>
<td>10-15mg/kg po q4h Max: 75mg/kg up to 2g/daily</td>
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<tr>
<td>Acetylsalicylic acid, ASA</td>
<td>Aspirin</td>
<td>325-650 mg po q4h Max: 4g/daily</td>
<td>Not generally used (Reye’s syndrome)</td>
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<tr>
<td>Celecoxib*</td>
<td>Celebrex</td>
<td>100-200mg po daily or bid Max: 400mg/daily</td>
<td>N/A</td>
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<tr>
<td>Choline Magnesium Trisalicylate</td>
<td>Trilisate</td>
<td>500-1500mg po q8-12h Max: 3200mg/daily</td>
<td>25mg/kg po Q12h prn</td>
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<tr>
<td>Ibuprofen</td>
<td>Motrin</td>
<td>400mg po q6h 800mg po q8h Max: 3200mg/daily</td>
<td>4-10mg/kg po Q6-8h Max: 40mg/kg/daily</td>
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<tr>
<td>Indomethacin</td>
<td>Indocin</td>
<td>25-50mg po Q6-12h po prn Max: 200mg/daily</td>
<td>1-2mg/kg po q6-12h po prn Max: 40mg/kg/daily</td>
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<tr>
<td>Naproxen</td>
<td>Naprosyn</td>
<td>250-500mg po q12h Max: 1500mg/daily</td>
<td>5mg/kg po q12h prn Max: 1000mg/daily</td>
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<tr>
<td>Salsalate</td>
<td>Salsitab</td>
<td>500-1000mg po q4-8h Max: 3g/daily</td>
<td>N/A</td>
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<tr>
<td>Sulindac</td>
<td>Clinoril</td>
<td>150-200mg po q12h Max: 400mg/daily</td>
<td>N/A</td>
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<tr>
<td>Ketorolac</td>
<td>Toradol</td>
<td>30mg IV q6h x8 doses Max: 120mg/daily</td>
<td>0.5mg/kg IV q6h Max: 2mg/kg/daily</td>
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<tr>
<td>Tramadol</td>
<td>Ultracet*</td>
<td>50-100 mg q6h po prn Max: 400mg/daily</td>
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</table>

*Non-Formulary or restricted on Shands Formulary

<table>
<thead>
<tr>
<th>Medication</th>
<th>Trade Name</th>
<th>Beginning Max Dose</th>
<th>Max Dose</th>
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<tbody>
<tr>
<td>TCA's:</td>
<td></td>
<td>25mg po qhs</td>
<td>200mg/d</td>
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<tr>
<td>Amitriptyline</td>
<td></td>
<td>150mg/d</td>
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<tr>
<td>Nortriptyline</td>
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<td>200mg/d</td>
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<tr>
<td>Desipramine</td>
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<td></td>
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<tr>
<td>SRNI's:</td>
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<td>37.5mg po bid 60mg po daily</td>
<td>75mg po tid 120mg/d</td>
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<tr>
<td>Venlafaxine</td>
<td>Effexor IR</td>
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<tr>
<td>Duloxetine*</td>
<td>Cymbalta</td>
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<tr>
<td>Gabapentin</td>
<td>Neurontin</td>
<td>300mg po qhs-tid</td>
<td>3600mg/d</td>
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<tr>
<td>Pregabalin</td>
<td>Lyrica</td>
<td>50mg po tid</td>
<td>100mg po tid</td>
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<tr>
<td>Oxcarbazepine</td>
<td>Trileptal</td>
<td>300mg po bid</td>
<td>2400mg/d</td>
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<tr>
<td>Capsaicin* Cream</td>
<td>Zostrix</td>
<td>0.025% q4h</td>
<td>0.075% q4h</td>
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<tr>
<td>Lidocaine Patch*</td>
<td>Lidoderm</td>
<td>5% 1-3 patches daily (remove for 12 hours)</td>
<td>3 patches topicaly/d</td>
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</tbody>
</table>

Addiction: (Psychological dependence)
- Characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving.
- A primary, chronic, neurobiological disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations.

Dependence: (Physical)
- 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 (AAPM, APS, ASAM 2001)

Pseudo addiction:
- Behaviors that appear to indicate addiction but actually reflect undertreated pain.

Tolerance:
- State of adaptation in which exposure to a drug induces changes that result in diminution of one or more of the drug’s effect over time.
- Tolerance does not equal addiction.