**DUKE UNIVERSITY HEALTH SYSTEM**  
**PAIN, AGITATION, AND DELIRIUM (PAD) ORDER SET FOR MECHANICALLY VENTILATED ICU PATIENTS**

**OPIOID NÄIVE/LOW**

**NOT intended for the following populations:** neuromuscular blockade, oscillation ventilation, targeted temperature management, refractory intracranial hypertension, status epilepticus, severe alcohol withdrawal or any other indication where deep sedation may be warranted as determined by provider.

- Discontinue previous intravenous and enteral analgesic and sedative orders
- Medication Message Order: PAIN-AGITATION-DELIRIUM PROTOCOL
- Review patient’s home medications to assess for opiate tolerance and consider restarting adjunctive analgesics

**STEP 1 – PAIN:** Titrated analgesia to maintain GOAL of ≤ 3 using the Numeric Rating Scale (NRS, 1-10) (preferred as gold standard) or CPOT ≤ 2. Assess every 4 hours while at goal. Assess pain within 30-60 minutes after dose changes or titrations. Consider PCA if patient can appropriately manage.

- **Fentanyl**
  - Maintenance PRN (Use if NOT on an infusion): Fentanyl ____ mcg IV every 15 minutes PRN pain (NRS > 3 or CPOT > 2), ventilator asynchrony, pre-emptive analgesia. A PRN for pre-emptive analgesia does not count in advancing protocol (example: the progression to an infusion).
    - If patient requires ≥4 doses in less than 4 hours, notify provider and proceed to continuous infusion.
    - If NRS ≤ 3 or CPOT ≤ 2 (pain at goal) and RASS above goal, notify provider and proceed to Step 2.
  - Continuous Infusion: Fentanyl 12.5-150 mcg/hr IV. Start infusion at 25 mcg/hr.
    - If NRS > 3 or CPOT > 2 (pain present)
      - Give fentanyl bolus for acute pain
      - If ≥ 4 PRNs are required in less than 4 hours, then increase infusion by 12.5 mcg/hr
    - If NRS ≤ 3 or CPOT ≤ 2 (pain at goal) AND
      - RASS below goal
        - Patient on opioid infusion only: Hold opioid infusion until RASS at goal. May resume at one-half of previous infusion rate if pain above goal.
        - Patient on opioid infusion and sedative: Wean sedative to goal RASS. If sedative weaned to off, and NRS ≤ 3 or CPOT ≤ 2 and RASS remains below goal, hold opioid infusion until RASS at goal. May resume at one-half of previous infusion rate if pain above goal.
      - RASS at goal for 4 hours
        - Decrease infusion rate by 12.5 mcg/hr and reassess per protocol.
      - RASS above goal
        - Notify provider and proceed to Step 2
  - Bolus from Infusion PRN (Use if ON an infusion): Fentanyl PRN bolus from infusion 12.5-150 mcg IV every 30 minutes PRN pain (NRS > 3 or CPOT > 2), ventilator asynchrony, pre-emptive analgesia. PRN dose is equivalent to infusion rate. A PRN for pre-emptive analgesia does not count in advancing protocol (example: changing infusion rate).

- **Hydromorphone**
  - Maintenance PRN (Use if NOT on an infusion): Hydromorphone ____ mg IV every 30 minutes PRN pain (NRS > 3 or CPOT > 2), ventilator asynchrony, pre-emptive analgesia. A PRN for pre-emptive analgesia does not count in advancing protocol (example: the progression to an infusion).
    - If patient requires ≥4 doses in less than 4 hours, notify provider and proceed to continuous infusion.
    - If NRS ≤ 3 or CPOT ≤ 2 (pain at goal) and RASS above goal, notify provider and proceed to Step 2.
  - Continuous Infusion: Hydromorphone 0.25-2 mg/hr. Start infusion at 0.25 mg/hr. If ≥ 4 PRNs required in less than 4 hours, increase by 0.25 mg/hr.
    - If NRS > 3 or CPOT > 2 (pain present)
      - Give hydromorphone bolus for acute pain
      - If ≥ 4 PRNs are required in less than 4 hours, then increase infusion by 0.25 mg/hr
### If NRS ≤ 3 or CPOT ≤ 2 (pain at goal) AND RASS below goal:
- Patient on opioid infusion only: Hold opioid infusion until RASS at goal. May resume at one-half of previous infusion rate if pain above goal.
- Patient on opioid infusion and sedative: Wean sedative first to goal RASS. If sedative weaned to off, and NRS ≤ 3 or CPOT ≤ 2 and RASS remain below goal, hold opioid infusion until RASS at goal. May resume at one-half of previous infusion rate if pain above goal.

### RASS at goal for 4 hours
- Decrease by 0.25 mg/hr and reassess per protocol.

### RASS above goal
- Notify provider and proceed to Step 2.

### Bolus from Infusion PRN (Use if ON an infusion): Hydromorphone bolus from infusion 0.25-2 mg IV every 30 min PRN pain (NRS > 3 or CPOT >2), ventilator asynchrony, pre-emptive analgesia. PRN dose is equivalent to infusion rate. A PRN for pre-emptive analgesia does not count in advancing protocol (example: changing infusion rate).

<table>
<thead>
<tr>
<th>STEP 2 – AGITATION: Assess RASS every 4 hours if at goal. Assess RASS 1 hour after dose changes or titrations.</th>
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<tbody>
<tr>
<td><strong>If no specific indication for sedative exists (e.g. alcohol withdrawal) then proceed to the following in order of preference:</strong></td>
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<tr>
<td>□ Propofol 1000 mg/100 mL premix (concentration 10 mg/mL)</td>
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<tr>
<td>▪ Propofol 5-60 mcg/kg/min. Initial propofol starting rate of 5 mcg/kg/min. Titrate infusion to goal RASS. Dose may be adjusted in increments of 5 mcg/kg/min every 5 minutes.</td>
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<td>▪ Patient must be mechanically ventilated. Requires continuous ECG monitoring</td>
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<tr>
<td>▪ Consider checking triglycerides 48 hours after propofol initiation, and every 7 days thereafter.</td>
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<tr>
<td>□ Dexmedetomidine 400 mcg/100 mL premix (concentration 4 mcg/mL)</td>
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<tr>
<td>▪ Dexmedetomidine 0.2-1 mcg/hr. Initial dexmedetomidine starting rate of 0.3 mcg/kg/hr. Titrate infusion to goal RASS. Dose may be adjusted in increments of 0.1 mcg/kg/hr every 15 minutes. Do not exceed 1 mcg/kg/hr.</td>
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</table>

**CRITERIA FOR USE: CHECK ALL THAT APPLY (MUST CHECK TO PROCEED)**
- Anticipated extubation in less than 12-24 hours
- Failure of other sedation strategies and is experiencing severe agitation
- Contraindication to propofol

**Second-Line**
- Lorazepam 1 mg IV PRN every 4 hours PRN agitation, pain at goal, and RASS above goal. Notify provider if requires 3 doses over 12 hours.

<table>
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<tr>
<th>STEP 3 – DELIRIUM: Assess every 12 hours using CAM-ICU. Goal is CAM-ICU negative or patient’s baseline. Assess that all causes of delirium have been ruled out and/or treated and consider the use of non-pharmacologic strategies for delirium management.</th>
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<tbody>
<tr>
<td>✗ Delirium prevention and sleep enhancement measures per nursing policy</td>
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<tr>
<td>✗ Contact provider for a newly identified CAM-positive assessment</td>
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**ADJUNCTIVE AGENTS**
- □ Senna-s 2 tablets VT BID
- □ Miralax 17g VT daily
- □ Acetaminophen ___ mg VT q6 hours

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