### Appendix B. Sample Standard IV PCA Order Set for Opioid Naïve® ADULT Patients

1. **D/C All previous opioid pain medications, including removal of FentaNYL patches.**
2. **Start PCA:** ASAP or __________ at __________
3. **Educate family:** PCA by proxy is NOT allowed

<table>
<thead>
<tr>
<th>4. PCA settings (Single strength standards)</th>
<th>□ Morphine (1 mg/ml)</th>
<th>□ HYDROmorphone (DILAUDID®) 0.2 mg/ml</th>
<th>□ FentaNYL (SUB-LIMAZE®) 10 mcg/ml</th>
<th>□ Other: __________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading Bolus</td>
<td>□ 2 mg □ ______ mg</td>
<td>□ 0.4 mg □ ______ mg</td>
<td>□ 20 mcg □ ______ mcg</td>
<td>□ ______ mg</td>
</tr>
<tr>
<td>PCA Dose</td>
<td>□ 1 mg □ ______ mg</td>
<td>□ 0.2 mg □ ______ mg</td>
<td>□ 10 mcg □ ______ mcg</td>
<td>□ ______ mg</td>
</tr>
<tr>
<td>Lockout Interval</td>
<td>□ 10 min □ ______ min</td>
<td>□ 10 min □ ______ min</td>
<td>□ 10 min □ ______ min</td>
<td>□ ______ min</td>
</tr>
<tr>
<td><strong>Optional Basal/Continuous Dose</strong> (Hold if RR &lt; 12, O2 saturation &lt;90% or not easily aroused)</td>
<td>______ mg/hr (If required: usual 0.5-1 mg/hr)</td>
<td>______ mg/hr (If required: usual 0.1-0.2 mg/hr)</td>
<td>______ mcg/hr (If required: usual 5-10 mcg/hr)</td>
<td>______ mcg/hr</td>
</tr>
<tr>
<td><strong>Optional Max limit (1 hr) (PCA &amp; Basal combined)</strong></td>
<td>□ ______ mg/hr</td>
<td>□ ______ mg/hr</td>
<td>□ ______ mcg/hr</td>
<td>□ ______ mg/hr</td>
</tr>
<tr>
<td>Bolus by RN PRN Breakthrough Pain (Hold if RR &lt; 12, O2 saturation &lt;90% or not easily aroused)</td>
<td>□ 2 mg □ ______ mg IV q _____ hrs prn</td>
<td>□ 0.4 mg □ ______ mg IV q _____ hrs prn</td>
<td>□ 20 mcg □ ______ mcg IV q _____ hrs prn</td>
<td>□ ______ mg</td>
</tr>
</tbody>
</table>

5. **PCA DOSE (ONLY) ADJUSTMENTS:**
   - Nurse may increase or decrease PCA DOSE (ONLY) if acceptable level of pain not met with next assessment. Increase by:
     - morphine 0.2 mg
     - HYDROMorphone 0.04 mg
     - fentaNYL 2 mcg
   - The maximum total number of PCA DOSE INCREASES allowed before calling the prescriber are __________
   - Call prescriber for any dosage adjustment

6. **RESPIRATORY DEPRESSION:**
   - If RR < 10/min, very shallow and ineffective, or if patient is unarousable or difficult to arouse (RASS -3):
     - Stop PCA, maintain IV and NOTIFY MD STAT
     - Metoclopramide (Reglan) - 10 mg IV q6hrs PRN nausea/vomiting (possibly advantageous over others if poor GI motility is considered the cause of N/V)
     - Ondansetron (Zofran) - 4 mg IV q12hrs PRN nausea/vomiting if no relief in 30-60 minutes following administration of promethazine
     - Diphenhydramine (Benadryl) 25 mg IV q6hr PRN; MR x1 at 15 minutes if ineffective.

7. **TREATMENT AND PREVENTION OF OTHER SIDE EFFECTS:**
   - Constipation:
     - Senna-S or Senna Plus Docusate - 2 tabs PO every morning
     - MOM - 30 ml PO q6hrs PRN
     - If above therapies not effective: Fleets - Enema, PRN
   - Nausea/Vomiting:
     - Promethazine (Phenergan) - 6.25 mg IV q6hrs PRN for nausea/vomiting (Safety precautions: Dilute in 10 ml NS – assure IV patency before giving; give slowly; if patient complains of pain, stop! Use a large vein or preferably a central line if available; may repeat x1 if ineffective in 15 min.)
     - Metoclopramide (Reglan) - 10 mg IV q6hrs PRN nausea/vomiting if no relief in 30-60 minutes following administration of promethazine
   - If Diphenhydramine (Benadryl) 50 mg is ineffective, call prescriber to consider alternative therapies or opioids (e.g., change morphine to HYDROMorphone or to fentanyl).

8. **MONITORING:**
   - Before initiation of PCA: Baseline vital signs and assess PAIN, SEDATION, RESPIRATORY RATE and QUALITY.
   - **Initiation of PCA or Change in Drug:** Monitor PAIN, SEDATION, RESPIRATORY RATE and QUALITY – q15 min x 1 hr, q1 hr x 4 hrs, then q2 hrs; Nursing to start PCA flow sheet, document total dose and number of attempts at end of shift
   - **Dose Change (Bolus):** Monitor PAIN, SEDATION, RESPIRATORY RATE and QUALITY – q1 hr x 4 hrs, then q2 hrs
   - **Event or Deterioration:** Monitor PAIN, SEDATION, RESPIRATORY RATE and QUALITY – q15 min x 1 hr, q1 hr x 4 hrs, then q2 hrs
   - IV required to maintain access; Call prescriber if IV cannot be maintained

---

**San Diego Patient Safety Council**

**PCA Guidelines of Care**

---

*a* FDA defined opioid tolerance (not naïve): Patients who are considered opioid-tolerant are those who have been taking, for a week or longer, at least 60 mg of morphine daily, or at least 30 mg of oral oxycODONE daily, or at least 8 mg of oral HYDROMorphone daily or an equianalgesic dose of another opioid.