DEFINITIONS

Established Plan of Care: the plan of care for PCA will be considered established when the patient is comfortable when moving and sleeping and has progressed to q4h vital signs monitoring. The plan of care must be documented in the nursing care plan. If any change in setting or medication or increased frequency of monitoring is required, the plan of care is no longer considered established.

Patient Controlled Analgesia (PCA): is a method of pain control designed to allow the patient to administer pre-set doses of an analgesic, on demand (APS, 2003)

ROLES

Registered Nurses (RNs) - as assigned, RNs care autonomously for patients requiring PCA for pain management. RNs provide consultation and collaboration to others as needed as patient needs become more complex.

Graduate Nurses (GNs) – as assigned, GNs provide care, with direct supervision, for patients requiring PCA for pain management until deemed competent to practice autonomously.

Graduate Licensed Practical Nurses (GLPNs) - GLPNs identified by their manager, in targeted practice settings, will be certified in the LPN Additional Competency Patient Controlled Analgesia with an Established Plan of Care, and may provide care as assigned, for patients who are less complex, more predictable, and at lower risk for negative outcomes, with the direct supervision of an RN or certified LPN.

Licensed Practical Nurses (LPNs) - LPNs identified by their manager, in targeted practice settings, will be certified in the LPN Additional Competency “Patient Controlled Analgesia with an Established Plan of Care”, and may provide care autonomously, as assigned, for patients who are less complex, more predictable, and at lower risk for negative outcomes. If a change is required in the plan of care, the LPN will consult with a RN or physician, and work collaboratively to establish a new plan of care.
PREAMBLE

The Goals of Pain Management:

**Goal 1**: The PCA medication will not necessarily eliminate all pain, but allow sufficient pain relief to make the patient comfortable when moving and sleeping.

**Goal 2**: Minimize unpleasant side-effects related to opioid use (e.g. nausea, vomiting, pruritus, urinary retention, constipation, sedation, respiratory depression).

Goals of Patient/Family Education:
The patient or family will understand that although pain is expected after surgery, treatments will be used to manage pain so that the patient is comfortable at rest, during movement, and when asleep.

Discuss:
- The patient should NOT wait until he/she is suffering unbearably with pain before pressing the PCA button to receive more medication.
- “Putting up with the pain” will not speed recovery, and may instead interfere with healing.
- It is appropriate to use medication to manage pain – doing so as instructed is not associated with an increased risk of addiction.
- It may not be safe to completely eliminate all pain after surgery.
- Non-pharmacologic interventions may also be appropriate to use to reduce pain and medication requirements.
- Pain will be assessed regularly using a standardized tool. The purpose of pain assessment is to determine the appropriateness of treatment or whether further assessment is needed.

1. PURPOSE

1.1 To provide safe, optimal pain management.

1.2 To allow patients to participate in their own pain management.

2. POLICY

<table>
<thead>
<tr>
<th>Education required for LPN certification</th>
<th>The LPN certified in PCA with an Established Plan of Care will have first completed the following learning module/activities prior to caring for a patient with PCA:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Attended an educational session on PCA,</td>
</tr>
<tr>
<td></td>
<td>- Completed the PCA Learning Package and quiz and returned to clinical nurse educator,</td>
</tr>
<tr>
<td></td>
<td>- Completed the skills checklist with an RN or certified LPN to validate and ensure that safety checks are followed appropriately.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physician Order</th>
<th>At RUH the Anesthesiologist is responsible for selection of patients as candidates for PCA and for all orders regarding PCA.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At SPH &amp; SCH the Most Responsible Physician (MRP) may select PCA candidates and write PCA orders.</td>
</tr>
<tr>
<td></td>
<td>Anesthesiologist or MRP will complete the appropriate PCA order set. See Appendix A</td>
</tr>
<tr>
<td>Responsible for initiation/loading dose</td>
<td>RN, GN</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Responsible for maintenance and patient teaching</td>
<td>RN, GN, Certified LPN as assigned, once patient monitoring progressed to q4h</td>
</tr>
<tr>
<td>Modes of PCA Delivery</td>
<td>Loading Dose – delivers a medication dose during set-up or at any time during PCA administration</td>
</tr>
<tr>
<td></td>
<td>PCA mode – delivers a bolus medication dose only at the patient’s request provided the lock-out interval is not in effect and the 4 hour dose limit has not been exceeded. Dose is activated by the patient depressing the bolus button on the patient pendant.</td>
</tr>
<tr>
<td></td>
<td>Continuous Mode – delivers at a pre-set continuous rate and does not allow the patient to request a PCA dose</td>
</tr>
<tr>
<td></td>
<td>PCA and Continuous Mode – delivers at a pre-set continuous rate while allowing the patient access to the PCA mode.</td>
</tr>
<tr>
<td>Tubing Change</td>
<td>q 96 h</td>
</tr>
<tr>
<td>Special Considerations</td>
<td>Use PCA pump with DERS (Drug Error Reduction Software) if available.</td>
</tr>
<tr>
<td></td>
<td>A continuous IV infusion is required for PCA administration.</td>
</tr>
<tr>
<td></td>
<td>PCA can be administered through a peripheral IV or central venous catheter</td>
</tr>
<tr>
<td></td>
<td>PCA tubing must be clamped prior to opening the pump door</td>
</tr>
<tr>
<td></td>
<td>Loading dose shall be considered an IV push medication and administered according to Nursing Policy #1089 Intravenous – Push Administration</td>
</tr>
<tr>
<td></td>
<td>PCA processes (e.g., programming, cartridge changes) are considered High Alert processes and must follow Regional Policy #7311-60-020 High Alert Medications – Identification, Double Check &amp; Labeling</td>
</tr>
<tr>
<td></td>
<td>Pump keys (to lock and unlock the pump) will be available and kept secure with the narcotics.</td>
</tr>
<tr>
<td></td>
<td>PCA cartridges will be provided by Pharmacy.</td>
</tr>
<tr>
<td></td>
<td>PCA cartridges requiring refrigerated storage will be kept in a locked fridge.</td>
</tr>
<tr>
<td></td>
<td>Naloxone (Narcan ®) and Resuscitation Equipment must be available on the Nursing Unit</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Frequency:</td>
</tr>
<tr>
<td></td>
<td>As per Order Set</td>
</tr>
<tr>
<td></td>
<td>o On initiation of the PCA</td>
</tr>
<tr>
<td></td>
<td>o On arrival to Unit from PACU,</td>
</tr>
<tr>
<td></td>
<td>o With each change in setting or medication</td>
</tr>
<tr>
<td></td>
<td>Requirements:</td>
</tr>
<tr>
<td></td>
<td>Respiratory rate &amp; quality, unstimulated</td>
</tr>
<tr>
<td></td>
<td>Vital signs as per PCA Order Set</td>
</tr>
<tr>
<td></td>
<td>Sedation and Pain Scale scores- see Appendix C</td>
</tr>
<tr>
<td></td>
<td>Difficulty with voiding, nausea/vomiting, pruritus, and constipation.</td>
</tr>
<tr>
<td>Documentation</td>
<td>On PCA Standard Order form:</td>
</tr>
<tr>
<td></td>
<td>o Initial programming and start time by 2 RNs or GNs currently competent in PCAs,</td>
</tr>
<tr>
<td></td>
<td>On Medication Administration Record (MAR):</td>
</tr>
<tr>
<td></td>
<td>o Cumulative total q4h</td>
</tr>
</tbody>
</table>
3. PROCEDURE

3.1 Gather supplies

- PCA set – Long with Injector, Mini-Bore (SKU#502035)
- PCA pump & key
- Preloaded narcotic cartridge as ordered

3.2 Ensure patient and family teaching has been done. Whenever possible, patient teaching should be done pre-operatively, when the patient is alert. Include:

3.2.1 The use of the “button”

- Not to press the button if pain is well controlled or if experiencing increased sedation.
- No one else is to press the button. Ensure family knows this as well.

3.2.2 The pump will be programmed to “lock out” for a period of time after the dose is delivered.

3.2.3 The frequency of assessments including the pain scale and pain scale used.

- Explain the purpose of assessing pain using standardized pain scales.
- Explain that the pain score provided by the patient will only be compared to other scores provided by that patient (within-person) to determine the effectiveness of treatment.

3.2.4 The goal of pain management. (See Preamble)

3.2.5 Instructions to notify the nurse if experiencing side effects including: increased difficulty breathing, increased sedation, itching, rash, nausea, difficulty voiding, and/or increased pain.
3.3 Attach preloaded narcotic cartridge to PCA set and prime PCA line either manually or with use of PCA prompts after inserted into pump.

3.4 Close upper slide clamp adjacent to PCA medication cartridge.

3.5 Attach IV infusion to luer lock port above back check valve on the PCA tubing. Prime primary line of PCA set with IV solution.

**Note:** a continuous IV infusion is required.

3.6 Insert cartridge into PCA pump aligning bar code with bar-code reader. If the cartridge is a Pharmacy compounded cartridge, ensure the drug label is visible for verification.

3.7 Program PCA according to physician’s orders, performing independent double check, following High Alert Medication policy # 7311-60-020.

3.8 Connect PCA set to patient’s IV site at extension set or port nearest insertion site. Secure button within patient’s reach.

3.9 Open slide clamp and start PCA

3.10 Monitor and document according to the policy & PCA Order Set.

4. RELATED POLICIES

High Alert Policy
Pain Management – Pediatric Care
5. REFERENCES:


### Patient Controlled Analgesia (PCA) with MORPhine Order Set

#### Vitals/Monitoring

- HR, Respiratory rate and quality (unstimulated), BP, SpO₂ and Sedation and Pain Scale on PCA initiation, dose increase or dose decrease due to over sedation q15min x 4, q4h x 4 then q4h until discontinued
- High alert medication independent double-check at PCA initiation (see below) and pump setting or cartridge changes
- Notify the □ Anesthesiologist on-call OR □ MRP if:
  - SBP less than 90 mmHg
  - HR less than 50 beats/minute
  - RR less than/equal to 10 breaths/minute
  - SpO₂ saturation less than or equal to 92% despite O₂ administration
  - Patient difficult to rouse
  - Pain scale at rest is greater than 4/10
  - Uncontrolled side effects

#### Pain Management

**PCA Analgesia**

- □ Anesthesiologist OR □ MRP: ____________________________
  - Orders any required changes to the PCA bolus dose, lockout period, and/or continuous infusion
  - Orders all oral narcotics, non-opioid analgesics and NSAIDs
  - Orders/approves any other narcotics and sedatives (benzodiazepines and zopiclone) administered while on PCA
  - New pain management medication orders are written by whoever discontinues the PCA
  - Pain medication orders written by a consultant service (e.g., Anesthesiology) can be processed and followed until such a time as the MRP can document agreement/disagreement with the orders
  - May have acetaminophen if ordered by MRP/Surgeon for fever

**PCA Drug and Pump Settings**

- □ Check one: □ Opiate/narcotic naïve OR □ Opiate/narcotic Tolerant
  - MORPhine 30 mg in 30 mL (1 mg/mL)
    - PCA dose ________________ mg
    - Lockout interval __________ minutes
    - Four hour dose limit __________ mg/4 hours
    - Continuous infusion rate __________ mg/h (if required for opiate tolerant patient)
  - If pain is not controlled within the 1st hour of PCA initiation:
    - □ Increase PCA dose to __________ mg
    - □ Decrease the lockout period to __________ minutes if pain is not controlled within the 1st hour of increasing the PCA dose
    - □ Call Anesthesiologist

- □ Pump set-up and started at __________ hrs by __________________________ RN/LPN
- □ Pump checked by __________ RN/LPN

---

**PRACTITIONER PRINTED NAME** __________________________

**PRACTITIONER SIGNATURE** __________________________

**DATE/TIME** __________________________
**Pain Management continued...**

Adjuvant Therapy (to be discontinued when PCA discontinued)

- **O2** _______L/minute to keep SpO2 greater than 92%
  - **max acetaminophen from all sources 4,000 mg in 24 hours***
  - **acetaminophen** _______ mg (650 mg or 975 mg) PO/PR QID x 48 hours then stop
  - **ibuprofen** 400 mg PO QID x 48 hours then stop
  - **OR**
  - **naproxen** 500 mg PO q12h x 48 hours then stop

Other: __________________________________________________________________________

---

**Management of Pain Medication Side Effects** (to be discontinued when PCA discontinued)

Respiratory Depression

- If RR less than 10 breaths/minute:
  - **Stimulate patient**
  - **Stop PCA infusion immediately, administer no further opiates and notify the Anesthesiologist on call or MRP (as per page 1 of the order set) and Respiratory Therapist STAT**
  - **Administer O2 at 10 L/minute by simple mask**

- If RR less than 8 breaths/minute:
  - As above plus:
    - **naloxone 0.08 mg IV STAT and assess response; may repeat q3min for a total of 3 doses**
    - **mix 0.4 mg with normal saline to a total volume 10 mL**
    - **administer 0.08 mg (2 mL) IV push and observe response**
    - **complete medication incident report if naloxone administered**

Nausea / Vomiting

- **ondansetron** 4 mg PO/IV q6h PRN **OR** __________

- If ondansetron ineffective, change to **DIN** (as needed)

Pruritus

- **diphenhydramine** 12.5 – 50 mg PO/IV q4h PRN (use lowest possible dose for effect for elderly/frail)

- Other: _________________________________________________________________________

Constipation

- **Monitor bowel function daily and if last BM more than 48 hours ago notify MRP**

Urinary Retention

- **Insert urinary catheter to straight drainage PRN and MRP to review within 24 hours**

---

**Additional Orders**

_________________________________________________________________________________
Patient Controlled Analgesia (PCA) with Meperidine Order Set

***ordering of PCA meperidine is reserved for Anesthesiologists in situations where the patient requires short-term PCA drug delivery, has normal renal, hepatic and CNS function and has a contraindication to MORPhine; recommended max dose 600 mg/24hrs and max duration 48hrs***

Vitals/Monitoring
- [ ] HR, Respiratory rate and quality (unstimulated), BP, SpO₂ and Sedation and Pain Scale on PCA initiation, dose increase or dose decrease due to over sedation q15min x 4, q1h x 4 then q4h until discontinued
- [ ] High alert medication independent double-check at PCA initiation (see below) and pump setting or cartridge changes
- [ ] High alert medication verification q shift and on transfer of care
- [ ] Notify the [ ] Anesthesiologist on-call OR [ ] MRP if:
  - SBP less than 90 mmHg
  - HR less than 50 beats/minute
  - RR less than/equal to 10 breaths/minute
  - Patient difficult to rouse
  - Pain scale at rest is greater than 4/10
  - Uncontrolled side effects
  - O₂ saturation less than / equal to 92% despite O₂ administration

Pain Management

PCA Analgesia
- [ ] Anesthesiologist OR [ ] MRP:
  - [ ] Orders any required changes to the PCA bolus dose, lockout period, and/or continuous infusion
  - [ ] Orders all oral narcotics, non-opiate analgesics and NSAIDs
  - [ ] Orders/approves any other narcotics and sedatives (benzodiazepines and zopiclone) administered while on PCA
  - [ ] New pain management medication orders are written by whoever discontinues the PCA
  - [ ] Pain medication orders written by a consultant service (e.g. Anesthesia) can be processed and followed until such a time as the MRP can document agreement/disagreement with the orders
  - [ ] May have acetaminophen if ordered by MRP/Surgeon for fever

PCA Drug and Pump Settings
- [ ] Check one: [ ] Opiate/narcotic naive OR [ ] Opiate/narcotic Tolerant
- [ ] meperidine 300 mg in 30 ml (10 mg/mL)
  - [ ] PCA dose ______ mg
  - [ ] Lockout interval ______ minutes
  - [ ] Four hour dose limit ______ mg/4 hours
  - [ ] Continuous infusion rate ______ mg/h (if required for opiate tolerant patient)
- [ ] If pain is not controlled within the 1st hour of PCA initiation:
  - [ ] Increase PCA dose to ______ mg
  - [ ] Decrease the lockout period to ______ minutes if pain is not controlled within the 1st hour of increasing the PCA dose
  - [ ] Call Anesthesiologist

- [ ] Pump set-up and started at ______ hrs by ____________ RN/LPN
- [ ] Pump checked by ____________ RN/LPN

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Form #104021 02/16 Category: Orders PCAMEP Page 1 of 2
Patient Controlled Analgesia (PCA) with Meperidine Order Set

**Pain Management continued...**

**Adjuvant Therapy (to be discontinued when PCA discontinued)**

- **O₂:** ______ L/minute to keep SpO₂ greater than 92%
- **max acetaminophen from all sources 4,000 mg in 24 hours**
  - □ acetaminophen ______ mg (650 mg or 975 mg) PO/PR QID x 48 hours then stop
  - □ ibuprofen 400 mg PO QID x 48 hours then stop
  - OR
  - □ naproxen 500 mg PO q12h x 48 hours then stop
  - Other: _____________________________________________________________

**Management of Pain Medication Side Effects (to be discontinued when PCA discontinued)**

**Respiratory Depression**

- □ If RR less than 10 breaths/minute:
  - □ Stimulate patient
  - □ Stop PCA infusion immediately, administer no further opiates and notify the Anesthesiologist on call or MRP (as per page 1 of the order set) and Respiratory Therapist STAT
  - □ Administer O₂ at 10 L/minute by simple mask
- □ If RR less than 8 breaths/minute:
  - As above plus:
    - □ naloxone 0.08 mg IV STAT and assess response; may repeat q3min for a total of 3 doses
    - □ mix 0.4 mg with normal saline to a total volume 10 mL
    - □ administer 0.08 mg (2 mL) IV push and observe response
    - □ complete medication incident report if naloxone administered

**Nausea / Vomiting**

- □ ondansetron 4 mg PO/Lv q6h PRN OR _________________________________
- □ If ondansetron ineffective, change to dimenhydrinate (DRINATE 12.5 – 50 mg PO/Lv q4h PRN) (use lowest possible dose for effect for elderly/frail)

**Pruritus**

- □ diphenhydramine 12.5 – 50 mg PO/Lv q4h PRN (use lowest possible dose for effect for elderly/frail)
- □ Other: ___________________________________________________________

**Constipation**

- □ Monitor bowel function daily and if last BM more than 48 hours ago notify MRP

**Urinary Retention**

- □ Insert urinary catheter to straight drainage FRN and MRP to review within 24 hours

**Additional Orders**

---

**Practitioner Printed Name:**

**Practitioner Signature:**

**Date/Time:**

---

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**PHYSICIAN'S ORDERS**

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>ORDERS AND SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>PEDIATRIC</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intravenous Patient Controlled Analgesia (PCA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Page 1 of 2)</td>
</tr>
</tbody>
</table>

**PATIENT WEIGHT: ____________ kg**

Discontinue all other narcotic / analgesic / sedation orders.
No other narcotics / analgesics / sedatives / hypnotics unless approved by SPEC.

1. **Pump Program**
   a. Pediatric intravenous PCA pump with **Morphine 1mg/mL**
   b. Loading Dose: zero/nil mg
   c. Program bolus dose: _____ mg (0.02 mg/kg to a maximum dose of 1.2 mg)
   d. Dose duration: STAT
   e. Lockout period: __________ minutes
   f. 4 hr total dose limit: _____ mg (maximum of 0.4 mg/kg or 20 bolus doses)
   g. Continuous infusion: _____ mg/hr (0.01 – 0.02 mg/kg/hr)

   a. **Anti-nauseants** (to be discontinued when PCA discontinued)
   - Dimektane DRINATE (0.5mg/kg/dose to a maximum dose of 50mg)
     _____ mg IV/PO/PR q6h PRN
   - Ondansetron (0.1mg/kg/dose to a maximum dose of 4mg) _____ mg IV q6h prn

   b. **Anti-pruritics** (to be discontinued when PCA discontinued)
   - Diphendydr/AMINE (0.5mg/kg/dose to a maximum dose of 50mg)
     _____ mg IV/PO q6h PRN (Do not use within 4 hours of dimate/DRINATE)

   c. **Adjunctive Therapy** (to be discontinued when PCA discontinued)
   - Acetaminophen (10 - 20 mg/kg/dose) _____ mg po / pr
     - QID while awake for _____ hours OR - QID PRN
     *Maximum 4g acetaminophen per 24 hours from all sources*
   - Ketorolac _____ mg (0.5mg/kg/dose to a maximum dose of 30mg) IV
     - q6h for _____ hours (max. 72 hours) OR - q6h PRN (max. 72 hours)
   - Ibuprofen (4 - 10mg/kg/dose to a maximum dose of 400mg)
     _____ mg po - QID while awake for _____ hours OR - QID PRN
   - Naproxen (5 - 10mg/kg/dose to a maximum dose of 500mg) _____ mg po
     - q12h for _____ hours OR - q12h PRN

**NOTE:** Use only one NSAID at a time

Print Physician Name: ____________________________
Physician's Signature: ____________________________

Initial pump programmed and verified at _____ hrs on ______ (date)
by 1. ___________ RN 2. ___________ RN

---

*Appendix B*
### Patient Controlled Analgesia (PCA) Policies & Procedures

**Page 1 of 12**

**SASKATOON HEALTH REGION**
Saskatoon, Saskatchewan

☐ RUH  ☐ SCH  ☐ SPH  ☐ OTHER

**PHYSICIAN’S ORDERS**
Page 1 of 2

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>ORDERS AND SIGNATURE</th>
</tr>
</thead>
</table>

**PEDIATRIC Intravenous Patient Controlled Analgesia (PCA)**

**Page 1 of 2**

**PATIENT WEIGHT:** __________ kg

Discontinue all other narcotic / analgesic / sedation orders.
No other narcotics / analgesics / sedatives / hypnotics unless approved by SPEC

1. **Pump Program**
   a. Pediatric intravenous PCA pump with **Morphine 1mg/mL**
   b. Loading Dose: zero/nill mg
   c. Program bolus dose: __________ mg (0.02 mg/kg to a maximum dose of 1.2 mg)
   d. Dose duration: STAT
   e. Lockout period: __________ minutes
   f. 4 hr total dose limit: __________ mg (maximum of 0.4 mg/kg or 20 bolus doses)
   g. Continuous infusion: __________ mg/hr (0.01 – 0.02 mg/kg/hr)

a. **Anti-nauseants** (to be discontinued when PCA discontinued)
   - Dimenhydrinate (0.5mg/kg/dose to maximum dose of 50mg)
     - __________ mg IV/PO/PR q6h PRN
   - Ondansetron (0.1mg/kg/dose to a maximum dose of 4mg) __________ mg IV q6h prn

b. **Anti-pruritic**s (to be discontinued when PCA discontinued)
   - Diphenhydramine (0.5mg/kg/dose to a maximum dose of 50mg)
     - __________ mg IV/PO q6h PRN (Do not use within 4 hours of dimenhydrinate)

c. **Adjunctive Therapy** (to be discontinued when PCA discontinued)
   - Acetaminophen (10 - 20 mg/kg/dose) __________ mg po / pr
     - QID while awake for __________ hours OR __ QID PRN
     - Maximum 4g acetaminophen per 24 hours from all sources
   - Ketorolac __________ mg (0.5mg/kg/dose to maximum dose of 30mg) IV
     - q6h for __________ hours (max. 72 hours) OR __ q6h PRN (max. 72 hours)
     - OR __ Ibuprofen (4 - 10mg/kg/dose to maximum dose of 400mg)
       - __________ mg po QID while awake for __________ hours OR __ QID PRN
       - OR __ Naproxen (5 - 10mg/kg/dose to maximum dose of 500mg) __________ mg po
         - q12h for __________ hours OR __ q12h PRN

**NOTE:** Use only one NSAID at a time

Print Physician Name: __________________________ | Physician’s Signature: __________________________ | continue on Page 2

Initial pump programmed and verified at __________ hrs on __________ (date)
by 1. __________ RN 2. __________ RN

**PCAPED1**

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<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
</table>

### Orders and Signature

**Pediatric Intravenous Patient Controlled Analgesia (PCA)**

#### 2. Patient Monitoring (Refer to Tri-Site PCA Policy 1053)
   a. Monitor / record RR, HR, O₂ saturation, sedation and comfort levels upon initiation, dose increase, or dose decrease due to over sedation:
      - q15min x 4; q1h x 4; then q4h until PCA is discontinued.
   b. Maintain O₂ saturation greater than 92%
   c. Naloxone to be immediately available on the unit
   d. Urinary retention: Insert foley to straight drainage prn and review in 24 hours

#### 3. Emergency Procedures
   a. Respiratory depression (if patient unarousable or RR less than 12)
      - **Stop PCA and call anesthesia STAT**
      - Administer O₂ at 10 liters per minute by facemask
      - Give Naloxone (0.005 – 0.01 mg/kg) _______mg IV stat
      - May repeat Naloxone _______mg q 5 minutes x 2 doses (to be discontinued when PCA discontinued)

#### 4. Contact SPEC (Mon. to Fri. days) or Anesthesia via Switchboard if:
   - 4 hour total dose limit is exceeded
   - Inadequate pain control
   - Nausea or pruritis not responding to treatment
   - Problems or concerns with PCA pump

---

Physician Signature:

Print Physician Name:

---

**PCAPED2**
Use one of these self-report tools if possible
(Substitute alternate words like "hurt" or "soreness" if patient does not use the word "pain")

Numeric Rating Scale (NRS, 0-10 scale): "Tell me how much pain you have right now using a number from 0 to 10, where 0 is no pain, and 10 is the most pain possible."

Faces Pain Scale-Revised (FPS-R): "These faces show how much something can hurt. This face [point to left-most face] shows no hurt. These faces show more and more hurt [point to each, from left to right] up to this one. [Point to right-most face] It shows the most hurt possible. Point to the face that shows how much you hurt in your body right now."

Verbal Descriptor Scale (VDS): "How much soreness do you have right now: none, mild, moderate or severe?"

If patient is non-verbal, has dementia, or has communication barriers that prevent self-report, use behavioral assessment tool like the PAINAD.

### Behavioral Tool – PAINAD

<table>
<thead>
<tr>
<th>Behavior</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing</td>
<td>Normal</td>
<td>- Occasional labored breathing</td>
<td>- Noisy labored breathing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Short period of hyperventilation</td>
<td>- Long period of hyperventilation</td>
</tr>
<tr>
<td>Negative</td>
<td>None</td>
<td>- Occasional moan or groan</td>
<td>- Repeated troubled calling out</td>
</tr>
<tr>
<td>vocalization</td>
<td></td>
<td>- Low level speech with negative or disapproving quality</td>
<td>- Loud moaning or groaning</td>
</tr>
<tr>
<td>Facial</td>
<td>Smiling or neutral</td>
<td>- Sad, frightened, frown</td>
<td>- Crying</td>
</tr>
<tr>
<td>expression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body</td>
<td>Relaxed</td>
<td>- Tense, distressed pacing, fidgeting</td>
<td>- Rigid, fists clenched, knees pulled up, pushing or pulling away, striking out</td>
</tr>
<tr>
<td>language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolability</td>
<td>No need to console</td>
<td>- Distracted or reassured by voice or touch</td>
<td>- Unable to console, distract or reassure</td>
</tr>
<tr>
<td>Total Score (of all 5 behaviors)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### POSS Sedation Scale

- **5 = Sleep, easy to rouse**: Acceptable; no action necessary.
- **1 = Awake and alert**: Acceptable; no action necessary.
- **2 = Slightly drowsy, easily roused**: Acceptable; no action necessary.
- **3 = Frequently drowsy, arousable, drifts off to sleep during conversation**: Unacceptable; monitor respiratory status and sedation level closely until sedation level is stable at less than 3 and respiratory status is satisfactory. Review orders set & notify Anesthesiologist or MRP.
- **4 = Somnolent, minimal or no response to verbal and physical stimulation**: Unacceptable; stop opioid; consider administering naloxone. If respiration is less than 10 refer to order set. Notify Anesthesiology or MRP. Continuously monitor patient until stable or other orders obtained.