



## Patient Controlled Analgesia (PCA)

### PURPOSE

To optimize pain control for patients with post-operative pain with the purpose of promoting rest, comfort, activity tolerance, and enhance patient satisfaction with adequate pain relief.

### SCOPE

Registered nurses (RNs) and licensed practical nurses (LPNs).

The RN is responsible for assessing the patient, developing the plan of care, and then directing the LPN in implementation of the plan of care through focused data collection and interventions.

### DEFINITIONS

- A. **Loading dose (initial dose):** one-time dose given to the patient as ordered by the Provider. Must be given by the RN and monitored closely.
- B. **Lockout interval:** minimum amount of time during which the PCA cannot be activated and no analgesic can be delivered by the patient.
- C. **Four hour limit:** maximum amount of medication (both continuous and bolus) that the patient can receive in a 4 hour time span.
- D. **Bolus dose (PCA dose):** amount administered each time the patient activates the dose
- E. **Continuous infusion:** amount of medication to be automatically administered over an hour without the need to manually activate the dose.
- F. **Clinician dose:** an additional dose given to a patient on a PRN basis ordered by the Provider. May be given during the lockout interval.

### POLICY

- Patient Controlled Analgesia (PCA) requires a medical provider order that addresses the following:
  - Medication and concentration
  - Loading dose

- Bolus dose
- Continuous infusion
- Lockout interval
- 4 hour limit
- The PCA shall be verified by a two nurse check (one of whom must be an RN) according to the procedure described below.
- Before starting a patient on PCA, the following criteria should be met on post-op patients:
  - **Spinal anesthesia:**
    - At least partial return of sensation with epidural PCA
    - Stable vital signs
  - **General Anesthesia:**
    - Patient readily arousable
    - Stable vital signs
- Medical providers will evaluate for necessity daily.

## PROCEDURE

- I. When to perform two nurse safety check:
  1. Upon initiation of PCA (setup and programming of pump)
  2. When changing a medication bag
  3. When rate changes occur
  4. When order changes occur
  5. When the care of the patient is transferred from one nurse to another (shift and/or location changes)
    - a. At the end of each shift, clear the infused dosage
  6. *Document two nurse check in the eMAR by 2 nurses at the time of the check outlined above, and total amount given.*
- II. Patient and family education:
  1. Review PCA education as outlined in EMR. Emphasize that only the patient is to self-administer the bolus dose, never the family or a staff member.
  2. Review and provide instruction to the patient prior to use.
- III. Monitoring and documentation
  1. Following initiation of the medication or whenever medication dosing is changed (increased or decreased), patient assessment will take place every 30 minutes x 3, every 1 hour x 4, and then every 4 hours or as ordered by the provider.
    - a. The assessment includes:
      - i. Pain rating
      - ii. Vital signs
      - iii. Sedation level
  2. Consider End Tidal CO2 monitoring is required while the PCA is in use for high-risk patients. Document every 4 hours.
- IV. Discontinuation

1. Clear pump and document amount
2. Remove any remaining medication and waste in appropriate controlled substance container with another nurse
3. Discard empty cartridge in garbage
4. Document waste in automated dispensing machine, or as appropriate per hospital policy

V. Staff education

1. During onboarding process:
  - a. RNs must complete PCA Training
  - b. RNs and LPNs are oriented to the PCA and Pain Management policies

## References

- [www.ISMP.org](http://www.ISMP.org)
- Smith, N., & Caple, C. (2012). Patient-controlled analgesia: Administration. CINAHL Nursing Guide. Ipswich, Massachusetts: EBSCO Publishing. Stetler- Level VIII Consensus Opinion