

## SARASOTA MEMORIAL HOSPITAL NURSING DEPARTMENT POLICY

<b>TITLE:</b> PROPOFOL SEDATION PROTOCOL	<b>POLICY:#:</b> 126.443 (Critical Care) 129.402 (Pharmacy) <b>EFFECTIVE DATE:</b> 1/95 <b>REVISED DATE:</b> 8/06, 5/09 <b>POLICY TYPE:</b> <input type="checkbox"/> DEPARTMENTAL <input checked="" type="checkbox"/> INTERDEPARTMENTAL <input type="checkbox"/> DEPARTMENTS PROVIDING NURSING CARE <b>PAGE:</b> 1 of 6
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**Job Title of Reviewer:** Director, ICU

**PURPOSE:** To establish criteria for the management and nursing care of a patient undergoing continuous Propofol infusion in the hospital setting.

**POLICY STATEMENT:**

1. Propofol (Diprivan) is indicated for use **only** in intubated mechanically ventilated adult patients. Administration of Propofol (Diprivan) is to be performed only by staff who have been educated on its specific considerations/properties, who have successfully completed ACLS training, and who are skilled in the management of critically ill patients.
2. Continuous Propofol infusion will be administered only in the Medical/Surgical/ Neuroscience ICU and Cardiovascular Intensive Care (CVICU). It may also be administered in the PACU. The Cath Lab and Radiology Nursing can **monitor and titrate** the infusion, but will **NOT** initiate the infusion. In the Cath Lab and Radiology, a propofol infusion may be initiated by a critical care nurse for post-procedural sedation, but not for procedural moderate sedation.
3. Propofol **will not** be administered to patients who:
  - a. Have known allergies to Propofol, soybean oil, egg lecithin, or glycerol.
  - b. Are 12 years of age or less.
  - c. Are pregnant or lactating mothers.
  - d. Are NOT intubated **AND** mechanically ventilated (unless a member of the Anesthesia Dept. is present).
4. Caution will be used in patients with:
  - a. Hyperlipidemia or those at risk to develop hyperlipidemia.
  - b. Patients who are concurrently receiving TPN/Lipids. When Propofol is initiated, the physician will need to reduce the amount of lipids the patient is receiving, as 1ml of Propofol contains approximately 0.1g of fat (1.1 Kcal). Nutrition consult suggested.

**POLICY**

**STATEMENT:**  
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- c. Patients with pancreatitis.
  - d. Patients who are hypotensive, hypovolemic, or hemodynamically unstable.
5. Prior to initiating Propofol infusion, the nurse will:
- a. Validate physicians' desired level of sedation on the Propofol Protocol. (The physician must specify the desired level of sedation if different from a Richmond Agitation Sedation Scale of -3.)
  - b. Perform a baseline assessment for:
    - 1) LOC/anxiety
    - 2) Vital signs
  - c. Assess patient's level of pain; **ensure** concomitant IV analgesia has been ordered.
6. A Bolus of Propofol may be administered by an anesthesiologist, CRNA, or critical care pulmonologist/intensivist. **NO BOLUS** of Propofol will be given by an RN. RNs may administer Propofol by continuous IV infusion, via infusion pump through a dedicated line. Though a central line is preferred, it can be infused via a peripheral site. If a dedicated line is not possible, Propofol may be given with TPN and intralipids as long as a separate pump with a three way stopcock is utilized.
7. **STRICT ASEPTIC** technique must be maintained during handling, as Propofol contains no antimicrobial preservatives. The vial rubber stopper will be disinfected using 70% isopropyl alcohol, prior to spiking the bottle with a sterile vent spike and sterile tubing. Infusion must commence immediately.
8. The Propofol infusion will be initiated at 5mcg/kg/min.
- a. No increase in the infusion rate will be made during the first 10 minutes of infusion. Assess the patient for hemodynamic response and level of sedation.
  - b. If the patient is hemodynamically stable, increase the infusion rate at 5mcg/kg/min. no faster than every 5 minutes until the desired level of sedation (specified by the physician) is attained. Most adult patients require maintenance rates of 5-50 mcg/kg/min. to maintain adequate levels of sedation. If patient is requiring more than 75 mcg/kg/min. notify the physician and reassess sedation options.

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9. Should the patient become hemodynamically unstable, follow the Propofol/Diprivan Sedation order set for hypotension and/or bradycardia.
  - a. Treatment of hypotension and bradycardia is as follows:
    - 1) For mild hypotension (systolic less than 90), decrease the infusion rate of Propofol by 5 mcg/kg/minute every 5 minutes. Bolus with 250 ml of normal saline ONCE. If systolic remains less than 90 after the 250 ml bolus, stop propofol and notify MD.
    - 2) Atropine 0.5 mg IV Push PRN ONCE only for Sustained symptomatic bradycardia (heart rate less than or equal to 50). If symptomatic bradycardia persists, stop propofol and call MD STAT.
10. Upon initiation of Propofol, vital signs will be documented as follows:
  - a. Every five (5) minutes X15 minutes.
  - b. Every 15 minutes x 2, every 30 minutes X2, then every one (1) hour if patient is hemodynamically stable throughout the infusion.
  - c. Five (5) minutes after each adjustment in infusion rate.
11. Pulse oximetry will be monitored continuously and documented every one (1) hour and PRN in the EMR (electronic medical record) or a vital sign flowsheet.
12. Any unused Propofol and the IV tubing **MUST BE** discarded after **12 hours**. As with other lipid emulsions, the number of IV line manipulations should be minimized.
13. Propofol solution, tubing, and clave must be changed every 12 hours.
14. A wake-up assessment will be carried out every 24 hours throughout the infusion, unless otherwise contraindicated. This requires an MD order placing the "Wakeup assessment" on hold.

**EXCEPTION:** Neurological/neurosurgical patients will have a "Wake up assessment" completed every 4 hours, unless otherwise contraindicated, or specified by the neurologist/neurosurgeon.

This daily assessment allows for the evaluation and assessment of: CNS function, pain management, and anxiety level. This ensures that the patient receives the lowest effective dose of Propofol necessary to achieve the desired level of sedation.

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- a. **AVOID ABRUPT** discontinuation of Propofol. (Do not just turn off the infusion). Rapid awakening may cause agitation and/or asynchrony with the ventilator due to the sudden influx of stimuli occurring during the transition from deep sedation to full consciousness.
  - b. Adjust the infusion rate to maintain a light level of sedation. For patients maintained at a RASS of -3 or higher, decrease the infusion rate in 5 mcg/kg/min in increments of 5 minutes intervals until a RASS of 0 is reached, or to the desired level specified by the physician. Once the patient has reached a lightly sedated level, determine the level of orientation appropriate for that patient, then discontinue the infusion. Within 10-15 minutes the patient usually will be completely awake (assuming the patient can achieve full consciousness).
15. After evaluation, titrate to a deeper level of sedation by increasing the infusion rate in 5 mcg/kg/min in 5 minutes intervals until the desired level of sedation specified by the physician is attained.
16. Weaning from the ventilator:
- a. Once the physician initiates the weaning process, all paralytic agents will be discontinued.
  - b. Gradually decrease the Propofol infusion rate until the patient reaches a light level of sedation. It is recommended that the Propofol infusion be continued in order to maintain a light level of sedation throughout the weaning process until 10-15 minutes prior to extubation, at which time the infusion can be discontinued.
17. Documentation:
- a. Propofol will be recorded in mcg/kg/min. in the Vital Sign Flowsheet of the EMR or a vital sign flowsheet.
  - b. The patient's level of sedation as indicated by the RASS will be recorded with each titration and then at least every two to four hours once stable (and more often as patient condition warrants) on the Vital Sign Flowsheet of the EMR under the short name RASS.
  - c. **Richmond Agitation Sedation Scale (RASS):**
    - +4 Combative
    - +3 Very agitated
    - +2 Agitated
    - +1 Restless
    - 0 Alert and calm
    - 1 Drowsy
    - 2 Light sedation
    - 3 Moderate sedation

- 4 Deep sedation
- 5 Unarousable

- d. Propofol will be recorded in the Intake & Output Flowsheet of the EMR under Propofol or a graphic flowsheet.

**EXCEPTIONS:** None

**RESPONSIBILITY:** It is the responsibility of the directors to ensure that the nursing staff is aware of, and adheres to, this policy.

- REFERENCE(S):**
1. Diprivan injection protocol: A guide to use in the intensive care. (2<sup>nd</sup> Edition). Stuart Pharmaceuticals.
  2. Diprivan injection protocol: Sedation protocol in the intensive care unit. Stuart Pharmaceuticals.
  3. Clark, S., Fontaine, D. & Simpson, T. "Recognition, Assessment and Treatment of Anxiety in the Critical Care Setting". Critical Care Nurse Supplement. August, 1994.
  4. Zellinger, M., Thomas, K. and Pohlman, A. "Management of Sedation in the Mechanically Ventilated Adult ICU Patient". NTI Symposium. May, 1997.
  5. Covington, Holly. "Use of Propofol for Sedation in the ICU". Critical Care Nurse. Volume 18, No. 4. August, 1998

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**APPROVALS:**

**Signatures indicate approval of the new or reviewed/revised department policy** **Date**

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