

The Mercy Hospital of Pittsburgh

Department of Emergency Medicine

Propofol for Procedural Sedation Guidelines

Background: Propofol is a sedative, hypnotic agent which offers deep sedation for brief painful procedures. Its onset of action is typically within 30 seconds of bolus dosing, and its clinical effects typically last no longer than 6 minutes. Its use can be complicated by the development of clinically significant respiratory depression, hypotension, and pain at the infusion site, as can occur with other agents for procedural sedation.

A recent review of propofol use in nearly 800 ED patients demonstrated an 8% incidence of desaturation; all respiratory events resolved with patient stimulation, airway repositioning, supplemental oxygen administration or a brief period of bag-valve-mask ventilation. Transient hypotension occurred in 3.5% and all resolved with either observation or a fluid bolus.

In order to ensure the safe administration of propofol in the DEM, the following guidelines should be used:

1. Propofol should be used for deep sedation for procedures anticipated to last less than 5 minutes in duration.
2. Propofol should not be used in the following patients:
 - a. Known to be volume depleted
 - b. Debilitated, elderly patients
 - c. History of sleep apnea
 - d. Severe COPD
 - e. Known Neuromuscular Disorders (e.g., Myasthenia Gravis)
 - f. Known or suspected structural airway abnormalities.
 - g. Clinical Intoxication
 - h. Morbid obesity (greater than 50% above Ideal Body Weight)
 - i. Last meal less than 6 hours OR clear liquid intake less than 2 hours
 - j. Previous sedation attempt within 6 hours
3. An attending emergency physician must be at the patient's bedside during propofol administration, be responsible for monitoring the patient during sedation, and not be the physician performing the procedure (i.e., 2 physicians at the bedside).
4. All patients receiving propofol must be placed on a cardiac monitor, continuous pulse oximetry, capnography, and automatic non-invasive blood pressure monitor.
5. Supplemental oxygen, ventilation and suction equipment must be at the patient's bedside.
6. All patients must have intravenous access established with normal saline at KVO.
7. A standard DEM procedural sedation form will be used on all patients.
8. Dosing
 - a. Propofol should be administered as a 1 mg/kg IV bolus with concomitant infusion of IV normal saline.
 - b. If sedation is insufficient, a single repeat bolus dose of propofol may be administered at the discretion of the attending emergency physician at 0.5 mg/kg IV.
 - c. Dosing should be titrated to slurring of speech and/or lid ptosis.
9. Vital signs and depth of sedation will be recorded on the procedural sedation form. Blood pressure monitoring should occur every 2 minutes after initial propofol bolus.
10. Management of complications:
 - a. Desaturation
 - i. Provide supplemental oxygen.
 - b. Hypoventilation
 - i. Reposition the airway with head tilt/chin lift or jaw thrust maneuver; if ineffective begin ventilatory assistance with bag-valve-mask ventilation.
 - c. Hypotension
 - i. Administer 250 cc normal saline bolus, repeat as needed to normalize blood pressure to a maximum of 2000 cc.
 - d. Pain with injection
 - i. This is infrequent, typically mild, and no intervention is necessary.
11. Discharge
 - a. The patient will be cleared for discharge by the attending emergency physician when the patient is ambulatory without assistance AND at least 30 minutes has passed since propofol administration.
 - b. Moderate sedation discharge instructions (in Wellsoft discharge program) will be provided to the patient.

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Propofol for Procedural Sedation Checklist**

NOT PART OF THE MEDICAL RECORD

Inclusion Criteria for propofol use
(patient must fit both criteria to proceed):

- _____ Last meal greater than 6 hours ago
- _____ Last clear liquids greater than 2 hours ago

Exclusion Criteria
(all the above must be checked as absent):

- _____ Patient NOT elderly and/or debilitated
- _____ NO known volume depletion
- _____ NO evidence of clinical intoxication
- _____ NO history of severe COPD
- _____ NO known history of sleep apnea
- _____ NO known neuromuscular disorder (e.g., Myesthenia Gravis)
- _____ NO known or suspected structural airway abnormality
- _____ NO morbid obesity (estimated > 50% over Ideal Body Weight)
- _____ NO previous sedation attempt within 6 hours