

Emergency Department Procedural Sedation and Analgesia Physician Checklist

[patient label]

Pre-Procedure Assessment

- Past medical history (note history of OSA) _____
- Prior problems with sedation/anesthesia _____
- Allergies to food or medications _____
- Procedure _____
- Dentures none / upper / lower [should remain in during PSA unless intubation required]
- Cardiorespiratory reserve no or mild impairment / moderate impairment / significant impairment
- Difficult airway features none / mild concern / significant concern
- Last oral intake (see fasting grid on reverse) _____ Will delay procedure until _____
- Weight (kg) _____ Benefits of proceeding with PSA exceed risks

Difficult Airway Features

Difficult Laryngoscopy: Look externally, Evaluate 3-3-2 rule, Mallampati score, Obstruction, Neck Mobility
 Difficult BVM Ventilation: Beard, Obese, No teeth, Elderly, Sleep Apnea / Snoring
 Difficult LMA: Restricted mouth opening, Obstruction, Distorted airway, Stiff lungs or c-spine
 Difficult Cricothyroidotomy: Surgery, Hematoma, Obesity, Radiation distortion or other deformity, Tumor*

Is this patient a good candidate for ED procedural sedation and analgesia?

The less **cardiorespiratory reserve**, the more **difficult airway features**, and the less **procedural urgency**, the more likely the patient should not receive PSA in the emergency department. If not a good candidate for ED-based PSA, other options include regional or local anesthetic; PSA or GA in the operating room; or endotracheal intubation in the ED.

Pre-procedure Preparation

- Analgesia - maximal patient comfort prior to PSA
- Informed consent for PSA and procedure
- Patient on monitor: telemetry, NIBP, SpO₂, EtCO₂
- Oxygenate with NC O₂ and high flow face mask O₂
- Select and draw up PSA agent(s)
- Reversal agents and paralytic vials at bedside
- Prepare for endotracheal intubation

Airway Equipment

- Ambu bag connected to oxygen
- Laryngoscopy handles and blades
- Suction, oral & nasal airways
- Endotracheal tubes & stylets
- LMA with lubricant and syringe
- Colorimetric capnometer
- Bougie & difficult airway equipment

| Agent | Dose* | Contraindications | Comments |
|----------------|---|---|---|
| Propofol | 0.5-1 mg/kg IV, then 0.5 mg/kg q1-2 min prn | Egg or soy allergy | Preferred for shorter procedures and where muscle relaxation is of benefit; avoid if hypotension is a concern |
| Ketamine | 1-2 mg/kg IV over 30-60 sec or 4-5 mg/kg IM, repeat half dose prn | Absolute: age < 3 months, schizophrenia Relative: major posterior oropharynx procedures; history of airway instability, tracheal surgery, or tracheal stenosis; active pulmonary infection or disease; cardiovascular disease; CNS masses, abnormalities, or hydrocephalus | Preferred for longer procedures; avoid if hypertension/tachycardia is a concern; have midazolam available to manage emergence distress; muscle tone is preserved or increased; post-procedure emesis may be mitigated by prophylactic ondansetron |
| Etomidate | 0.1-0.15 mg/kg IV, then 0.05 mg/kg q2-3 min prn | | Intra-procedure myoclonus or hypertonicity, as well as post-procedure emesis, are common |
| Fentanyl | 1-2 mcg/kg IV, then 1 mcg/kg q3-5 min prn | | Comparatively delayed onset of action; do not re-dose too quickly |
| Midazolam | .05 mg/kg IV, then .05 mg/kg q3-5 min prn | Pregnancy, allergy to benzyl alcohol | Comparatively delayed onset of action; do not re-dose too quickly |
| Pentobarbital | 1 mg/kg IV, then 1 mg/kg q3-5 min prn | Pregnancy, porphyria | Use for painless procedures where analgesia is not needed |
| Reversal Agent | Dose | | Caution |
| Naloxone | 0.01-0.1 mg/kg IV or IM (typical adult dose 0.4 mg), max 2 mg | | |
| Flumazenil | 0.01 mg/kg IV (typical adult dose 0.2 mg) over 20 seconds, max 1 mg | | Only use in benzodiazepine naïve patient |

*All doses should be reduced in the elderly and in patients with marginal hemodynamics

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Emergency Department PSA Checklist (page 2)

[patient label]



Detect hypoventilation early

Stop the drugs

Position the patient

Jaw thrust

Suction if needed

Laryngospasm notch pressure

Nasal airways

Consider reversal agents

Bag mask or LMA ventilation

Oral airway, ventilation

Intubate

PSA Intervention Sequence

- Proceed down intervention sequence as slowly as patient condition permits
- Jaw thrust as illustrated above - thumbs on maxilla, four fingers posterior to ramus
- Laryngospasm notch is behind the earlobe, between mastoid process and condyle of mandible – bilateral, firm pressure medially and cephalad (up and in)
- If rescue ventilation is required, bag slowly and gently
- see emupdates.com/psa for details

Post-procedure Assessment

- Adverse events none / hypoxia (< 90%) / aspiration / hypotension / agitation / other: _____
- Interventions taken none / bag valve mask / LMA / ETT / reversal agent / hypotension Rx / admission for PSA / other: _____
- Adequacy of PSA nondistressed / mild distress / severe distress
- Procedure successful / unsuccessful
- MD or RN at bedside until patient responds to voice
- Telemetry, EtCO₂, SpO₂ monitoring until patient responding to questions appropriately
- If reversal agent used, observation two hours after answering questions appropriately
- Mental status and ambulation at baseline at time of discharge/disposition

Fasting Grid

Standard risk patient**

Higher-risk patient**

| Oral intake in the prior 3 hours | Emergent Procedure | Urgent Procedure | Semi-urgent procedure | Non-urgent procedure | Oral intake in the prior 3 hours | Emergent Procedure | Urgent Procedure | Semi-urgent procedure | Non-urgent procedure |
|----------------------------------|------------------------|--|---|--|----------------------------------|------------------------|---|--|------------------------|
| Nothing | All levels of sedation | All levels of sedation | All levels of sedation | All levels of sedation | Nothing | All levels of sedation | All levels of sedation | All levels of sedation | All levels of sedation |
| Clear liquids only | All levels of sedation | All levels of sedation | Up to and including brief deep sedation | Up to and including extended moderate sedation | Clear liquids only | All levels of sedation | Up to and including brief deep sedation | Up to and including extended moderate sedation | Minimal sedation only |
| Light snack | All levels of sedation | Up to and including brief deep sedation | Up to and including dissociative sedation; non-extended moderate sedation | Minimal sedation only | Light snack | All levels of sedation | Up to and including dissociative sedation; non-extended moderate sedation | Minimal sedation only | Minimal sedation only |
| Heavier snack or meal | All levels of sedation | Up to and including extended moderate sedation | Minimal sedation only | Minimal sedation only | Heavier snack or meal | All levels of sedation | Up to and including dissociative sedation; non-extended moderate sedation | Minimal sedation only | Minimal sedation only |

Minimal sedation only → Dissociative sedation; brief or intermediate-length moderate sedation → Extended moderate sedation → Brief deep sedation → Intermediate or extended-length deep sedation

Brief: < 10 min
Intermediate: 10-20 min
Extended: > 20 min

Additional Comments

MD Name

Sign

Date/Time

**Walls RM and Murphy MF: Manual of Emergency Airway Management. Philadelphia, Lippincott, Williams and Wilkins, 3rd edition, 2008

**Green, Roback et al. Fasting and Emergency Department Procedural Sedation and Analgesia: A Consensus-Based Clinical Practice Advisory. Ann Emerg Med. 2007;49:454-461.