


Tracking and Reporting Outcomes Of Procedural Sedation (TROOPS)



A standardized quality improvement tool from the
International Committee for the Advancement of Procedural Sedation^a
www.TROOPS-sedation.com

No adverse events during sedation or recovery. (form completed)
 Yes, unplanned interventions or outcomes occurred. (check all that apply below)

	Intermediate	Sentinel	Suspected Etiology
Airway / Breathing	<input type="checkbox"/> Positive pressure ventilation ^b <input type="checkbox"/> Naloxone or flumazenil <input type="checkbox"/> Oral airway	<input type="checkbox"/> Tracheal intubation <input type="checkbox"/> Neuromuscular blockade <input type="checkbox"/> Pulmonary aspiration ^c	<input type="checkbox"/> Apnea ^d <input type="checkbox"/> Respiratory depression ^e <input type="checkbox"/> Upper airway obstruction ^f <input type="checkbox"/> Laryngospasm ^g
Circulation	<input type="checkbox"/> Bolus IV fluids	<input type="checkbox"/> Chest compressions <input type="checkbox"/> Vasoactive drug administration <input type="checkbox"/> Death	<input type="checkbox"/> Hypotension <input type="checkbox"/> Bradycardia <input type="checkbox"/> Cardiac arrest
Neuro	<input type="checkbox"/> Anticonvulsant administration	<input type="checkbox"/> Neurological deficit	<input type="checkbox"/> Seizure or seizure-like movements
Sedation Quality & Patient Experience	<input type="checkbox"/> Sedation insufficient <input type="checkbox"/> Escalation of care or hospitalization ^h <input type="checkbox"/> Provider dissatisfied <input type="checkbox"/> Patient/family dissatisfied		<input type="checkbox"/> Patient active resistance or need for restraint ⁱ <input type="checkbox"/> Sedation complication <input type="checkbox"/> Paradoxical response ^j <input type="checkbox"/> Unpleasant recovery reaction/agitation ^k <input type="checkbox"/> Unpleasant recall
<input type="checkbox"/> OTHER _____		<input type="checkbox"/> OTHER _____	

INTERMEDIATE Items can endanger patients if not promptly managed, or reflect suboptimal sedation quality or patient experience and warrant timely reporting with peer scrutiny.

SENTINEL Items are life-threatening and warrant immediate reporting and the highest level of peer scrutiny.

FOOTNOTES / DEFINITIONS

- a. The goal of the Tracking and Reporting Outcomes Of Procedural Sedation (TROOPS) form is to provide a standardized and practical tool intended for daily use to record procedural sedation adverse events, interventions, and outcomes relevant to the continuous assessment of patient safety and quality of care. This tool is intended for use by all types of sedation providers in all locations and for patients of all ages. It was developed by multidisciplinary consensus from the International Committee for the Advancement of Procedural Sedation (www.ProceduralSedation.org). Its elements can readily be incorporated into electronic medical records. TROOPS intentionally excludes timed event durations and specific thresholds (e.g., vital signs, oxygen desaturation, capnography) in favor of interventions and outcomes, which are more objective, clinically relevant, and more reliably recorded.
- b. Positive pressure ventilation (PPV) includes bag-mask ventilation (BMV), bilevel positive airway pressure (BiPAP), continuous positive airway pressure (CPAP) and laryngeal mask airway (LMA).
- c. Pulmonary aspiration is inhalation of oropharyngeal or gastric contents into the trachea during sedation or recovery and the appearance of new respiratory signs and symptoms.
- d. Apnea is cessation of ventilatory effort.
- e. Respiratory depression is decrease in ventilatory effort.
- f. Upper airway obstruction is partial or complete obstruction of the upper airway responsive to airway positioning or oral/nasal airway placement.
- g. Laryngospasm is partial or complete closure of the vocal cords that is not responsive to airway repositioning or oral/nasal airway placement.
- h. Escalation of care includes significant prolongation of clinical care (including delayed discharge) or hospitalization due to sedation factors, including transfer to a higher level of care.
- i. Need for restraint is more than minor physical restraint on more than one, brief occasion.
- j. Paradoxical response is an unanticipated restlessness or agitation in response to sedatives.
- k. Unpleasant recovery reaction/agitation is abnormal behaviors during the recovery stage of sedation (e.g., agitation, delirium, hallucinations) which are distressing to the patient or providers.

Fig 1. Paper-form version of the TROOPS continuous quality-improvement form. A mock-up of the corresponding version suitable for electronic medical records or web platforms can be viewed at www.TROOPS-sedation.com. TROOPS, Tracking and Reporting Outcomes of Procedural Sedation.