TROOPS Comprehensive Research Tool

International Committee for the Advancement of Procedural Sedation[a]

www.ProceduralSedation.org

❒ **No adverse events during sedation or recovery.** *(form completed)*

❒ **Yes, unplanned interventions or outcomes occurred.** *(check all that apply below)*

	Minor	*Intermediate*	*Sentinel*	*Suspected Etiology*
Airway & Breathing	❒ Increased or added supplemental oxygen ❒ Airway repositioning ❒ Tactile stimulation ❒ Suctioning for hypersalivation ❒ Anticholinergic for hypersalivation ❒ Nasal airway	❒ Positive pressure ventilation[b] ❒ Naloxone or flumazenil ❒ Oral airway	❒ Tracheal intubation ❒ Neuromuscular blockade ❒ Pulmonary aspiration[c]	❒ Apnea[d] ❒ Respiratory depression[e] ❒ Upper airway obstruction[f] ❒ Laryngospasm[g] ❒ Oxygen desaturation ❒ Abnormal capnography
Circulation		❒ Bolus IV fluids	❒ Vasoactive drug administration ❒ Chest compressions ❒ Death	❒ Hypotension ❒ Hypertension ❒ Bradycardia ❒ Tachycardia ❒ Cardiac arrest
GI	❒ Anti-emetic for nausea/vomiting ❒ Suctioning for emesis			❒ Nausea ❒ Vomiting
Neuro	❒ Additional sedative for myoclonus / rigidity	❒ Anticonvulsant administration	❒ Neurological deficit	❒ Seizure or seizure-like movements ❒ Myoclonus / muscle rigidity
Allergy	❒ Administration of antihistamine	❒ Administration of inhaled β-agonist ❒ Administration of epinephrine (adrenaline) for anaphylaxis		❒ Allergic reaction ❒ Anaphylaxis
Sedation Quality & Patient Experience		❒ Sedation insufficient ❒ Escalation of care or hospitalization[h] ❒ Provider dissatisfied ❒ Patient/family dissatisfied		❒ Patient active resistance or need for restraint[i] ❒ Sedation complication ❒ Paradoxical response[j] ❒ Unpleasant recovery reaction/agitation[k] ❒ Unpleasant recall

❒ Other _____ ❒ Other _____

_____ _____

MINOR items pose little risk given appropriate sedation provider skills and monitoring.	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) comprehensive research tool is to provide a standardized and practical tool to record procedural sedation adverse events, interventions, and outcomes. It is also possible that in specific clinical settings (e.g., newer sedation programs) it may be deemed appropriate to track some of these items for routine clinical practice. 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.