CGP 214

SEDATION POLICY & PROCEDURES

Table of Contents

1. POLICY INTRODUCTION

This policy establishes standards and guidelines for the use of procedural sedation (formerly termed "Conscious Sedation") within National Ambulance by privileged physicians and advance paramedics.

2. SCOPE

2.1. This policy applies when patients receive, in any setting, for any purpose, by any route, any sedatives or paralytics to do an invasive procedure. This policy exclude the narcotics and controlled medication used in low doses for pain management.

3. ROLES AND RESPONSIBILITIES

3.1. Chief Administrative and Medical Officer / Senior Medical Officer/Medical Delegate is responsible for development of this Policy and Procedure, review and revision and any Performance Indicators and should be available for advice and support.

3.2. The Chief Operations Officer is responsible for the implementation and monitoring of this Policy and Procedure

3.3. Education Manager is responsible for developing training to support this Policy and Procedure.

3.4. Clinical Staff that provide care for patients are responsible for acting according to this policy and procedure in accordance with their scope of practice. They are also responsible for ensuring that they attend or pursue any relevant training recommended by their supervisors. (i.e. eLearning and face to face training).

4. POLICY STATEMENT

4.1. The following policy sets uniform requirements and minimum standards for the use of procedural sedation for an invasive procedure performed at National Ambulance.

4.2. National Ambulance patients who receive procedural sedation for a procedure shall be provided a safe and comparable level of care consistent with, or in excess of, the minimum recognized standards for such procedures.

5. DEFINITIONS / ABBREVIATIONS

5.1. NON-ANESTHESIOLOGIST SEDATION CLINICIAN: A physician/Paramedics with current privileges in sedation techniques including demonstrated patient rescue and stabilization skills.

5.2. SUPERVISED SEDATION CLINICIAN: A clinician responsible for providing monitoring during the procedure.

5.3. PRIVILEGES: The clinical activities within National Ambulance that a clinician is permitted to perform based on the clinician's credentials and performance.

5.4. MINIMAL SEDATION (ANXIOLYSIS): A drug-induced state during which a patient responds normally to verbal commands. Cognitive functions and coordination may be impaired, but ventilatory and cardiovascular functions are unaffected.

5.5. MODERATE SEDATION (CONSCIOUS SEDATION): A drug-induced depression of consciousness during which a patient responds purposefully to verbal commands, either alone or accompanied by physical stimulation. No interventions are required to maintain a patent airway and spontaneous ventilation is adequate. Cardiovascular function is maintained. Usual moderately sedating agents include benzodiazepines (e.g., midazolam) and opioids (e.g., fentanyl, morphine).

5.6. DEEP SEDATION: A drug-induced depression of consciousness during which a patient cannot be easily aroused but responds purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. The patient may require assistance with maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained. Common deep sedating agents include propofol, ketamine, .

5.7. GENERAL ANAESTHESIA: unconscious and has no purposeful response to stimulation; airway and cardiorespiratory function may become profoundly depressed

5.8. AMERICAN SOCIETY OF ANESTHESIOLOGISTS (ASA) PATIENT PHYSICAL STATUS CLASSIFICATION:

ASA I – A normal healthy patient.

ASA II – A patient with mild systemic disease.

ASA III – A patient with severe systemic disease.

ASA IV – A patient with severe systemic disease that is a constant threat to life.

ASA V – A moribund (declining) patient who is not expected to survive without the operation.

5.9. ANALGESIA: means the reduction or elimination of pain. It is usually induced by drugs that act locally (by interfering with nerve conduction) or generally (by depressing pain perception in the central nervous system.

5.10. ANESTHESIA: involves the administration of a medication to produce a blunting or loss of pain perception (analgesia); voluntary and involuntary movements; autonomic function; and memory and/or consciousness, depending on where along the central neuraxial (brain and spinal cord) the medication is delivered. Anesthesia exists along a continuum. For some medications there is no bright line that distinguishes when their pharmacological properties bring about the physiologic transition from the analgesic to the anesthetic effects. Furthermore, each individual patient may respond differently to different types of medications.

6. RELEVANT LEGISLATION / STANDARD

International, federal or local legislation and circulars relevant to this Policy. Full detail on this legislation can be found in QHP109 Legal Register.

Code, Name of Legislation	Jurisdiction
JCI Accreditation Standards for Medical Transport Organization, 2nd Edition, July 2015	COP.4, COP.5

7. PROCEDURES

7.1. PRIVILEGING:

7.1.1. Clinician are privileged to provide the continuum of sedation from mild through deep sedation with no additional requirements.

7.1.2. Administration of Sedation is a specific privilege and must be granted via the privileging process for all Sedation Personnel.

7.1.3. All Sedation Personnel will be privileged by the Chief Administrative and Medical Officer / Senior Medical Officer to direct and administer sedation based on the National Ambulance Sedation Education requirements:

7.1.3.1. Each privileged clinician should receive “Approval of clinical privileges letter” signed by the Chief Administrative and Medical Officer / Senior Medical Officer. Please refer to CGF 149 & CGF 152

7.1.3.2. The Clinician must maintain a current Advanced Cardiac Life Support (ACLS) certification.

7.1.3.3. The Clinician must successfully complete the "Prehospital Sedation Training" and obtain recertification every two (2) years. The training component:

- Reading material reviewing relevant EMS pharmacology, AHA guidelines, NAMET Trauma management guidelines, Emergency Medical Services related producers and other relevant information.
- Complete airway management training course.
- Complete Basic/Advanced Medication Management Course according to the scope of practice

7.1.3.4. Upon successful completion of the training, the Education Manager will forward the successful Clinician's names (physicians, Paramedics) to the Chief Administrative and Medical Officer / Senior Medical Officer.

7.1.3.5. The successful Clinician (physician, Paramedics) must be granted the Sedation Privilege by the Chief Administrative and Medical Officer / Senior Medical Officer before they begin administering sedation.

7.1.4. Physicians have met these criteria are privileged to direct and administer sedation with no additional supervision requirements from the Chief Administrative and Medical Officer / Senior Medical Officer. Paramedics need to get authorization from licensed NA physician prior to drug administration.

7.2. INDICATION REQUIRED:

7.2.1. Patients with trauma requiring fracture reduction, splinting or extrication who are distressed and agitated by pain despite appropriate narcotic analgesia

7.2.2. Procedures (e.g. RSI, Transcutaneous Pacing or Synchronized cardioversion)

7.2.3. Ketamine disinhibition, or emergence

7.3. CONTRAINDICATIONS: The induction of sedation by the clinician requires CAREFUL ATTENTION to all aspects of risk assessment and close adherence to CGP 134 - with current airway compromise where securing the airway will be difficult. The risks associated with sedation include:

7.3.1. Potential for unintentional loss of consciousness

7.3.2. Depressed airway reflexes

7.3.3. Depressed respiration

7.3.4.Unpredictable responses due to drug effects and/or interactions

7.3.5.Depressed cardiovascular system

7.3.6.Inadequate analgesia

7.3.7.Individual variations in responses

7.4. COMPLICATIONS

7.4.1.Patients with current airway compromise where securing the airway will be difficult

Facilitation of tracheal intubation

7.5. 7.4. RESOURCES REQUIRED

7.5.1. **EQUIPMENT (MUST BE IMMEDIATELY AVAILABLE).**

- Blood pressure monitor.
- Pulse oximeter.
- Continuous ECG.
- Oxygen source, including a positive pressure oxygen delivery system (e.g., self-inflating bag-valve-mask device).
- EtCO2 Monitoring
- Functioning-suction apparatus.
- Emergency medication and equipment which includes emergency airway equipment.
- Appropriate reversal agents (i.e. Naloxone) located inside of the ALS bag.

7.5.2. **SEDATION PERSONNEL (MINIMUM OF TWO):**

- The operator/proceduralist (the Non-anesthesiologist Sedation Clinician (Physician/Paramedic).
- The monitoring assistant (usually the Supervised Sedation Clinician).

7.6. PRE-PROCEDURE:

7.6.1.The Non-anesthesiologist Sedation Clinician (Physician/Paramedic) will decide if the patient is a suitable candidate for planned sedation based on pre-sedation assessment which includes but is not limited to:

7.6.1.1. Physical status assessment (review of systems, vital signs, airway, cardiopulmonary reserve, past and present drug history including drug allergies);

7.6.1.2. Previous adverse experience with sedation and analgesia, as well as with regional and general anesthesia;

7.6.1.3. Assignment of physical status classification using The American Society of Anesthesiologists (ASA) Physical Status Classifications.

7.6.1.4. Candidates for sedation by Sedation Personnel must be in good general medical health and have adequate ventilatory reserve (ASA I-II only).

7.6.1.5. For patients who have significant medical problems deemed ASA III or greater consultation with the Chief Administrative and Medical Officer / Senior Medical Officer is required if the clinician is a paramedic and it is optional if the clinician is a physician.

7.6.1.6. Potential difficult airway management (i.e., distorted anatomy, obstructive sleep apnea, morbid obesity, micrognathia, immobilization of the head and neck).

7.6.1.7. Patient taking medication that may adversely react with sedatives or analgesics (i.e. MAO inhibitors in the last two weeks).

7.6.1.8. Prior history of adverse reaction to sedation or anesthesia.

7.6.1.9. Patients who are pregnant.

7.6.1.10. Family history of malignant hypertension.

7.6.1.11. History of chronic pain or significant drug/alcohol abuse.

7.6.2. **DIETARY PRECAUTIONS –**

7.6.2.1. Sedation may reduce airway protective reflexes, thus allowing pulmonary aspiration of gastric contents in the event of emesis. The use of sedation shall be preceded by an evaluation of food and fluid intake.

7.6.2.2. NPO Status:

- Clear liquid: 2 hours
- Light meal: 6 hours

7.6.2.3. Administration of intravenous fluids should be considered for patients experiencing prolonged fasting or who are at risk for dehydration.

7.6.2.4. Risk of aspiration during these procedures must be weighed against the benefits of sedation and analgesia such patients may benefit from delaying the procedure and administering appropriate pharmacologic treatment to reduce gastric volume and increase gastric pH. These patients may require protection of the airway before sedation.

7.6.3.**INFORMED CONSENT**

7.6.3.1. Each patient must receive an explanation regarding the risks and alternatives of sedation and documented on the CGF179 Consent Form.

7.6.3.2. Appropriate informed consent (Informed Consent for Sedation) for the procedure and sedation shall be obtained prior to sedation.

7.6.4.**INTRAVENOUS ACCESS**

7.6.4.1. Procedural sedation requires continuous IV access until the patient has transported/recovered.

7.7. INTRA-PROCEDURE:

7.7.1. Sedated patient must never be left alone during or immediately after initiation of sedation.

7.7.2. Loss of consciousness for patients undergoing sedation should not be the goal.

7.7.3. The minimum number of available personnel for any procedure employing sedation will be two and each is assigned to their specific roles in patient care for the purpose of the planned procedure:

- **The operator/proceduralist** – Clinician (Physician/Paramedic) performing the procedure, usually the Non-anesthesiologist Sedation Clinician.
  - Re-evaluate the patient immediately prior to induction (i.e. administration of sedatives), documenting ASA status, NPO status, airway evaluation, and any interim changes on the history and physical exam.
  - Administer the medications including dosage and route.
  - Direct the sedation technique.
  - Perform the procedure.
  - Utilize the clinical judgment whether to abort the procedure if the patient's clinical condition deteriorates at any time.
- **The monitor** – Clinician monitoring physiologic parameters during the procedure. This clinician will have no other responsibilities that leave the patient unattended or otherwise compromise patient monitoring.
  - Verifies that a complete history and physical, pre-sedation assessment, and sedation informed consent are documented. The assessment includes patient age, weight, NPO status, and baseline vital signs.

- Ensures that any medication allergies have been documented in the ePCR/PCR.
- Initiates venous access, IV, prior to sedation, and maintains it until hospital handover completed.
- Verifies correct medication with operator/proceduralist.
- Calculates the total maximum dose for that patient prior to starting the administration and verifies this with the operator/proceduralist.

7.7.4.**Monitoring During Procedure:**

- Heart rate, airway patency, and oxygen saturation shall be monitored continuously.
- Continuous ECG should be considered for patients who are ASA II and above.
- Supplemental oxygen shall be considered of oxygen saturation <95% at any time during the procedure.
- The following variables shall be monitored and recorded every five (5) – minute intervals or more frequently, if indicated, on the time-based record:
  - Blood pressure.
  - Heart rate.
  - Respiratory rate.
  - Oxygen saturation.
  - EtCO2
  - Responses to verbal stimuli or level of consciousness.
  - Medication(s) name, route, and dosage.
  - Total fluid intake
- Only those drugs that are included in the approved list are used for sedation (Appendix A, Adult Sedation and Analgesia).
  - The Chief Administrative and Medical Officer / Senior Medical Officer must approve any additions to or deletions from the list.
  - Special caution must be taken when medications are used in combinations. Combining two or more medications may potentiate their effects, especially on the respiratory system.

7.7.5. **DOCUMENTATION:**

- Adverse drug reactions are documented in ePCR and in the QHSE report.

- Any other unanticipated, unusual, or adverse events are to be described and recorded in the ePCR.

7.8. POST-PROCEDURE:

7.8.1. Post-procedure observation must occur in a suitable location.

7.8.2. Monitoring of vital signs and documentation will continue every 5 minutes after the last dose of sedation until patient meets transported to the hospital and/or returns to pre-sedation status:

- Blood pressure, heart rate, respiratory rate, oxygen saturation, EtCO2.
- Responses to verbal stimuli or level of consciousness;
- Nausea/vomiting and pain scores (CGP 113 – Pain Management Policy & Procedure).
- Medications and dosages, fluid types and volumes;
- Unusual, unanticipated, or adverse events.

7.8.3. Patients who have received sedation are never left unattended until they handover to the hospital. Sedation Personnel (Non-anesthesiologist Sedation Clinician and / or Monitor clinician) must remain with the patient constantly (a parent or other responsible adult is not acceptable).

7.8.4. Significant variations in physiologic parameters are reported immediately to the operator/proceduralist. These include but are not limited to:

- A variation of 20% or greater in BP or pulse compared to preoperative BP;
- Serious arrhythmia;
- O2 saturation greater than or equal to 5% below baseline;
- Dyspnea, apnea, or hypoventilation;
- The need to maintain the patient's airway mechanically; and
- Other untoward unexpected patient responses.

8. SEDATION PROTOCOL

- For detailed protocol refer to CGP 134 and medication formulary for doses, adverse reaction and contraindication.

9. ADDITONAL INFOMRATION

KETAMINE EMERGENCE:

9.1.1. A small number of patients will develop a Ketamine Emergence reaction. This must not be confused with the transient hypertonicity and nystagmus that occurs with administration of ketamine.

9.1.2. Approximately 5 – 10 per cent of patients administered Ketamine will be affected by emergence reaction. In the majority of patients, the symptoms will be mild.

9.1.3. **Management of Emergence reaction** should be:

- Reassurance and calming words to the patient.
- Ensure and maintaining a patent airway.
- The effects of emergence can be mitigated by a quiet calm environment with reduced light.
- Failing this, administration of midazolam should be undertaken in line with CGP 134 – Patient Care Protocol and Medication Formulary.

8. RELATED POLICIES AND FORMS

List related policies and procedures to the created/updated policy.

Policy & Procedure /Form
CGP134 Patient Protocol
CGF179 Sedation Consent Form

9. FEEDBACK

Any feedback or suggestions for improvement to this Policy, Processes or Procedures can be submitted to qhse@nationalambulance.ae

10.DOCUMENT CONTROL AND OWNERSHIP

A review and update of this document will take place as necessary, when changes occur that identify the need to revise this Policy such as changes in roles and responsibilities, release of new legislative or technical guidance, or identification of a new policy area.

This document ownership for editing is identified as:

- Chief Administrative and Medical Officer / Senior Medical Officer

Change Brief

Version No.	Date	Change
1	October 2019	*New Policy*
2	October 2021	Due for Review Change Medical Director title to Chief Administrative and Medical Officer / Senior Medical Officer

CAMO/ MD Approval

Board Member Verification