

YOUR HOSPITAL
Hospital Policy and Procedure Manual

POLICY #: TX.2.4.a

SUBJECT: CONSCIOUS SEDATION

EFFECTIVE DATE: 8/98

APPROVED BY:	DATE	NEW POLICY ()
_____	_____	REVISION (X)
_____	_____	SUPERSEDES POLICY #
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I. Policy

This policy applies to patients undergoing diagnostic, therapeutic or surgical procedures with conscious sedation.

II Definition:

The Sedation Continuum

Awake = Conscious = Deep = General
State Sedation Sedation Anesthesia

Conscious Sedation: A minimally depressed level of consciousness that retains the patient's ability to maintain a patent airway independently and continuously, and respond appropriately to physical stimulation. Loss of consciousness is unlikely, and the drugs, dosages, and techniques utilized are not intended to produce a loss of consciousness.

Deep Sedation: A controlled state of depressed consciousness or unconsciousness from which the patient is not easily aroused, accompanied by a partial or complete loss of protective reflexes, including the ability to maintain a patent airway independently and respond purposefully to physical stimulation or verbal command.

General Anesthesia: A controlled state of unconsciousness accompanied by a loss of protective reflexes, including loss of the ability to maintain a patent airway independently or to respond purposefully to physical stimulation or verbal command.

Whenever general anesthesia and deep sedation is administered, it will be provided by a practitioner credentialed to administer, whose procedures and policies regarding booking,

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patient selection and preparation, methods and monitoring and postoperative care are defined in their departmental policies.

III. Responsibility:

- A. Physicians authorized by the Medical Executive Committee to administer conscious sedation shall be deemed authorized to administer associated sedating drugs.
- B. Registered Nurses authorized to administer conscious sedation, assess, monitor and /or provide immediate post-procedure care to patients receiving conscious sedation Shall demonstrate competency in: airway management, use of medications and dosages, pulse oximetry, cardiac monitoring equipment, and arrhythmia recognition.
- C. Cardiac Catherterization Laboratory Technicians authorized to administer Medications for conscious sedation monitor or provide immediate post-procedure Care to patients receiving conscious sedation shall demonstrate competency in: Airway management, use of medications and dosages, pulse oximetry, cardiac Monitoring and equipment, and arrhythmia recognition.
- D. Initial competency must be established and maintained by re-evaluation annually. Successful completion of ACLS/PALS training is recommended.

IV. Staffing:

A minimum of two personnel must be involved in the care of patients undergoing conscious sedation during the entire procedure: 1) the physician who performs the diagnostic, therapeutic or surgical procedure and 2) the individual whose responsibility is directed only to the patient: to administer medication, to monitor the patient, and to observe the patient's response to both the sedation and the procedure.

V. Patient Selection Criteria:

ASA guidelines for risk classification are utilized in the selection of patients to receive sedation. (See Appendix A) This policy and procedure is not applicable to patients in emergent situations.

- A. The physician scheduling the procedure is responsible for assigning the patient An ASA classification. Anesthesia is available to consult if classification is unable to be determined.
- B. All patients falling into ASA classification I-III are eligible for conscious Sedation. They should be carefully evaluated by the attending physician to

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ensure that the magnitude of the procedure will not require the presence or involvement of Anesthesia Services to maintain patient safety.

- C. Patients that meet the criteria for ASA class IV or V require consultation and /or Sedation from a member of the Anesthesia Department.
- D. Ambulatory patients must have a competent adult to escort them home. This Must be established prior to starting the procedure. Patients who do not have an escort will be cancelled if the procedure cannot be done under local anesthesia without sedation. If the case is deemed urgent and requires sedation, the patient will be admitted under observation status.

VI. Consent

The patient/guardian must be informed about the risks and alternatives to sedation as a component of the planned procedure.

In the Emergency Department the consent is covered in the Authorization for Treatment section of the chart. The medical record should reflect that the risks and benefits of conscious sedation have been discussed with the patient prior to the procedure.

VII. Assessment and Documentation:

- A. All patients receiving conscious sedation will have the following: IV access, Pulse oximetry, BP monitoring, Oxygen apparatus available, Cardiac monitoring if ASA III or above, Emergency Code cart with intubation equipment, and medication reversal agents.
- B. Documentation Pre-procedure
 - Vital signs, level of consciousness, NPO status, pregnancy
 - Cardiopulmonary and mental assessment
 - Discussion of risks by the physician
 - ASA classification by the physician
 - Pre-procedure Aldrette score
- C. Documentation Intra-procedure
 - Vital signs, BP, pulse, respirations, pulse oximetry and level of conscious will be monitored continuously and documented every 5 minutes
 - Medication dose, route, times, and person administering medication
 - A full description of any usual event
- D. Documentation Post-procedure
 - Vital signs every 15 minutes x 3, including aldrette scoring
 - Narrative statement regarding tolerance of the sedation plus tolerance of the Procedure.

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- E. Discharge
A discharge/transfer order and follow-up care must be written by the physician.

Aldrette Score should be comparable to pre-procedure score prior to discharge.
Swallow, cough, and gag reflexes are present
Nausea and dizziness are minimal

Discharge instructions include: a verbalization of understanding of instructions, to return to the Emergency Department if problems occur and the practitioner cannot be reached, prohibition of the use of machinery/motor vehicles for 24 hours, and the responsible adult driver-caregiver.

If patients are to be transferred for further recovery within the institution, they will be accompanied by a MD, PA, credentialed RN or Cardiac Cath. Technician to a designated recovery area.

VIII. Drug Dosage Guidelines:

Medications for the purpose of conscious sedation will not be administered without the presence of the physician on the unit.

There must be a physician order specifying route and dosage of medication.

Dosages should be individually titrated for desired therapeutic effect.

A list of medications and dosages is provided which should serve as a guide to the drug administration for conscious sedation. This is not intended to be all inclusive.

RECOMMENDED AGENTS FOR INTRAVENOUS SEDATION IN *ADULTS*

Medications	Initial Dose	Dynamic	Comments
Sedatives:			
Midazolam (Versed)	1.0 –4.0 mg bolus, titrate in increments of 0.5 – 1 mg to desired effect. Elderly and/or debilitated: 0.5-1.5 mg bolus, titrate in increments of 0.5 mg	Onset: 1-5 min Duration: up to 2 hours.	Slurred speech is good end point for sedation Use 1/3 less if other CNS drugs including narcotics are in use. Use cautiously in elderly
Diazepam (Valium)	2.5-5.0 mg bolus, titrate in increments of 1.5 mg to desired effect. Elderly and/or debilitated: 1.25-2.5 mg bolus, titrate in increments of 1.0 mg.	Onset: 2-5 min. Duration: Beyond 3 hours.	Pain on injection Phlebitis See comments under Midazolam
Benzodiazepine Antagonist			
Flumazenil(Romazicon)	0.1 –0.2 mg for partial antagonism 0.4 –1.0 mg for complete antagonism	Onset: 1-3 min Duration: 45 minutes	Obtain history of current benzodiazepine use May induce benzodiazepine withdrawal seizure Half life of benzodiazepine may be longer than half life of flumazenil resulting in residual sedation, hypoventilation Flumazenil is not intended for routine reversal of benzodiazepine related sedation due to the risks of serious adverse effects, such as seizures.
Narcotics:			
Fentanyl (Sublimaze)	50-100 ug bolus, titrate in increments of 25 ug to desired effect.	Onset: 2-3 min Duration: 30-60 min	Reduce dose when given with sedatives. Useful as adjunct for sedation
Meperidine (Demerol)	12.5-25 Mg/min. May repeat to desired effect Should avoid in renal failure patients due to risk of CNS toxicity	Onset: 5-10 min Duration: 1-2 hrs.	Beneficial for pain Always monitor for: Respiratory depression Orthostatic circulatory depression, chest wall rigidity (Fentanyl)
Morphine	2-5 mg.	Onset 3-10 min Duration: 3-4 hrs.	N/V, constipation, urticaria
Narcotic antagonist			
Naloxone (Narcan)	0.2 – 0.4 mg, repeat after 3 min if resp. rate < 12 or level of consciousness remains depressed	Onset: 3 min Duration: 45-60 min.	History of narcotic use important to obtain to prevent onset of withdrawal symptoms Agitation due to return of pain. Sympathetic stimulation may cause elevation in BP, HR, Temp

RECOMMENDED AGENTS FOR INTRAVENOUS SEDATION IN *PEDIATRIC S*

Medication	Initial Dose	Dynamic	Comments
Sedatives: Midazolam (Versed)	0.05 mg/kg bolus, titrate in increments of 0.1 –0.15 mg/kg to desired effect. PR: 0.3 – 0.5 mg/kg PO: 0.5 – 0.75 mg/kg	Onset: 1-5 min, IV Duration: 20-30 min. up to 2 hours Onset: 20-30 min (PO or pr)	Slurred speech is good end point. Use 1/3 less if other CNS drugs including narcotics in use. Erratic absorption other than IV
Diazepam (Valium)	0.04 – 0.1 mg/kg bolus, titrate in increments of 1-2 mg to desired effect	Onset: 5-10 min. Duration: 2-3 min	Pain on injection Phlebitis See comments under Midazolam
Benzodiazepine Antagonists: Flumazenil (Romazicon)	< 20 kg: 0.01 mg/kg dose titrate 0.01 mg/kg every min to a total of 0.04 mg/kg >20 kg: 0.2 mg over 15 sec, if level of consciousness desired not obtained after 1 min, titrate 0.2 mg and repeat every minute to effect or total dose of 1.0 mg.	Onset: 2-3 min Duration: 45 min.	See Adult comments
Narcotics: Fentanyl (Sublimaze)	1-2 mcg/kg slowly over 2 min, titrate to desired effect	Onset: 2-3 min Duration: 2-4 hrs.	See Adult comments
Meperidine (Demerol)	Child: 1.0 mg/kg, titrate to desired effect	Onset: 3-10 min. Duration: 2-4 hrs.	See Adult comments
Morphine	0.05 – 0.1 mg/kg slowly over 4 min.	Onset: 3-5 min Duration: 3-4 hrs.	See Adult comments
Narcotic Antagonist Naloxone (Narcan)	0.01 mg/kg per dose, titrate to desired effect	Onset: 3-5 min Duration: 30-45 min.	See Adult comments

APPENDIX A

ASA* Physical Status classification

- Class I: A normally healthy patient.
- Class II: A patient with mild systemic disease.
- Class III: A patient with severe systemic disease that limits activity but is not Incapacitating.
- Class IV: A patient with severe systemic disease that is a constant threat to life.
- Class V: A morbid patient who is not expected to survive with or without the Operation.

* American Society of Anesthesiologists