Model Sedation Protocol for Moderate Sedation and Analgesia Performed by Non-Anesthesia Practitioners during Procedures on Adults and Children Older than 12 Years of Age

I. PURPOSE

Anesthesiologists are experts in the safe administration of Sedation and Analgesia: It is our profession. Because of the expertise of anesthesiologists, most medical facilities and medical staffs ask their Department of Anesthesiology to be responsible for overseeing the administration of medications which produce sedation and analgesia within the institution. This responsibility may include oversight of sedation and analgesia protocols, writing policies and procedures, and reviewing complications related to the administration of sedative medications. The most recent CMS interpretive guidelines, promulgated in 12/2009, have recognized this responsibility and now require hospitals to have anesthesia and sedation services administratively overseen by the Department of Anesthesiology. This element of the hospital Conditions of Participation by CMS also stipulates that there be one standard of practice for sedation within the institution. While sedation services may be overseen by the Department of Anesthesiology, administering moderate sedation to patients may also fall within the usual scope of practice of other Medical Staff departments.

In an effort to assist CSA members in the process of developing a safe, coordinated, facility-wide moderate sedation service, this sample protocol and privileging module is being offered as an example of a model moderate sedation protocol. This protocol can be used or adapted based on the needs of the facility and its patient population. This protocol should reside within the medical staff processes for credentialing and privileging. Adverse events related to sedation, such as unplanned admission, oxygen desaturation, cardio-respiratory arrest, use of sedative drugs above the recommended dosage range, and use of reversal agents should be routinely reviewed by the appropriate quality assurance entity of the Medical Staff. It is hoped that this sample protocol can be of use to you.

II. BACKGROUND

Sedation and general anesthesia represent different points on a continuum of the responses seen in patients receiving a drug (or combination of drugs) designed to produce an altered level of consciousness during a procedure. For example, small doses produce light sedation. In this state, the patient remains conscious, with some alteration of mood, relief of anxiety, drowsiness, and often analgesia. As the dose is increased or as other drugs are added, greater central nervous system depression occurs, resulting in deepening of sedation. Finally, when consciousness is lost and the patient cannot be aroused, general anesthesia begins. General anesthesia can be deepened by additional drug administration.

In addition to the drug dose, the degree of patient response depends on other factors including: route and rate of administration of each drug, combination and interactions with other agents and patient characteristics such as age, weight, medical condition, and medical co-morbidities.

Experience and knowledge of the pharmacology of drugs are necessary to administer effective moderate sedation without progression to general anesthesia. Administration of general anesthesia is limited to practitioners who, based on education and training, have been granted specific privileges to administer general anesthesia (or trainees directly supervised by a privileged anesthesia practitioner).

III. GOALS

A. To facilitate the capabilities of organizations to administer sedation and analgesia, administered by non-anesthesia trained practitioners, in a safe and coordinated manner.

B. To facilitate improved technical performance of the procedure.

C. To decrease patients' agitation and improve patients' cooperation during procedures.

D. To ensure age-appropriate care to all patients by ensuring that the clinical practitioners have the appropriate clinical competencies.

E. To achieve adequate sedation of the patients while minimizing risk to patients.

F. To minimize the patients' discomfort and pain.

G. To minimize the patients' negative psychological responses by administering adequate sedation, analgesia and amnesia.

H. To provide for patients' rapid recovery and safe discharge.

IV. EXCLUSIONS

A. This policy does not include pain management and anxiolysis.

B. This policy does not apply to patients on mechanical ventilation within ICUs.

C. Single doses of sedatives and narcotics (PO, IM, or IV) administered in usual and customary doses for routine care of patients during procedures such as dressing changes, etc., do not require the practitioner to follow the moderate sedation policy as long as the Modified Aldrete Score remains 9 or 10 as defined by this policy. If continual dosing is required during the procedure, the moderate sedation protocol would be used.

D. The decision as to whether to use a single dose of medication for anxiolysis for pain control versus using the moderate sedation policy should be based on the patient's history and physical and planned procedure.

E. Sedation administered by members of the Department of Anesthesiology.

V. LEVELS OF SEDATION AND ANESTHESIA DEFINED

A. **Mild Sedation (anxiolysis)** - This is a drug-induced state during which patients respond normally to verbal commands, although cognitive function and coordination may be impaired.

B. **Moderate Sedation/Analgesia ("moderate sedation")** - A drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions should be required to maintain a patent airway and spontaneous ventilation should be adequate. Additionally, cardiovascular function is usually maintained. Since the response of patients may vary, a higher level of assessment and monitoring of these patients is required. The guidelines in this policy are written specifically for moderate sedation.

C. **Deep Sedation/MAC Analgesia** - A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained. If deep sedation/MAC analgesia is required, the Department of Anesthesiology should be consulted for assistance and/or guidance.

D. **Anesthesia** - Consists of general anesthesia, major regional anesthesia, and monitored anesthesia care. It does not include simple local anesthetic infiltration. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is usually impaired. Patients usually require significant assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired. The Department of Anesthesiology is consulted in all such cases.

VI. REQUIREMENTS FOR ADULT MODERATE SEDATION PRACTITIONERS

A. Physicians

1. Education and Competency Requirements

   a. Use of moderate sedation will be limited to licensed practitioners with current clinical competency in the administration of adult moderate sedation and rescue techniques including emergency airway management.
   b. Qualifications can be documented at the time of initial appointment by continuing medical education certificate (which should include adult airway management and proof of current ACLS certification).
   c. Completion of the moderate sedation post-test with a score of 90% or greater.

2. Only those practitioners who have been granted appropriate clinical privileges by the Governing Body of the facility are to be permitted to order and/or supervise the administration of moderate sedation.

3. The ordering physician must be physically present when a Registered Nurse is administering medications to produce moderate sedation.

4. Continuing privileges will be maintained by documentation of at least 10 cases every two years as shown in the practitioner profiles submitted to the department chairman by the appropriate facility quality assurance process. If the practitioner does not perform at least 10 cases in two years, he/she must repeat one of the above initial requirements.

B. Registered Nurses

1. Licensed Registered Nurses administering medications to produce adult moderate sedation will be under the supervision of a physician who has adult moderate sedation privileges as demonstrated by completion of the Moderate Sedation post-test with a score of 90% or greater, and is physically present during sedation.

2. Patients receiving moderate sedation will be monitored and assessed in an appropriate location during and following the procedure by a Licensed Registered Nurse who has a current ACLS card or certificate of completion.

3. Education and Competency Requirements

a. Initial competency is achieved through the following:

1) Completion of Moderate Sedation Post-test with a score of 90% or greater.
2) Satisfactory administration of moderate sedation proctored by an Anesthesiologist, Certified Registered Nurse Anesthetist (CRNA) or licensed practitioner with moderate sedation analgesia privileges.

b. Annual competency

1) Completion of Moderate sedation post-test with a score of 90% or greater.
2) Completion of the skills validation sheet for adults with the Clinical Nurse Educator.

C. A record of Registered Nurses qualified to administer Moderate Sedation will be maintained in the facility.

D. All Sedation Analgesia Providers

1. All practitioners must be familiar with the medications being used with respect to dosage, administration route, adverse reactions, methods of reversal, and interventions.

2. All practitioners must be able to recognize and treat an obstructed airway, assess the patient's physiological status utilizing cardiac monitoring rate and rhythm, oxygen saturation, end tidal CO_2, blood pressure, and level of consciousness.

VII. PATIENT ASSESSMENT AND CRITERIA FOR SELECTION

A. Candidates for moderate sedation are those patients who must undergo painful or difficult procedures, where cooperation and/or comfort will be difficult or impossible to achieve without pharmacological support through the titration of narcotics and sedatives.

B. Patients must be screened for potential risk factors for any pharmacological agents selected. The decision as to which agent to use will be based on the goals of sedation, the type of procedure being performed, and the age and physiologic condition of the patient.

C. Risk Assessment: It is the responsibility of the physician to select only those patients who can safely undergo the required procedure with the use of moderate sedation. The risk of each case should be assessed and documented in the pre-procedural note. The following patients are examples of patients with medical conditions and co-morbidities that place patients at increased risk during moderate sedation.

1. Elderly patients (>70 years of age).

2. Pediatric patients (<12 for this protocol).

3. Morbidly obese patients.

4. Patients at increased risk of aspiration (e.g., full stomach, trauma, hiatal hernia, neurologically compromised, diabetic patients, patients taking narcotic medications).

5. Patients with concomitant diseases, especially cardiovascular and pulmonary diseases.

6. Pregnant patients.

7. Patients with a difficult airway, either for mask ventilation or intubation (known difficult intubation, neck injury, facial trauma or anomalies that would make mask ventilation and intubation difficult).

8. Diabetic patients.

9. Patients with a history of Obstructive Sleep Apnea (OSA) or symptoms of OSA.

D. All patients will be pre-screened by the ordering physician for risk factors including utilizing the ASA (American Society of Anesthesiologists) Physical Status Classification Scale, as documented on the pre-procedure notes:

1. All patients will have a completed History and Physical (H & P) in the medical records within 24 hours of the procedure. H & P completed within 30 days of admission is acceptable if an updated H & P is performed and the practitioner must document any changes to the patient's H & P or if they concur with the prior findings. The updated H & P must be attached to the original H & P.

2. All patients considered appropriate for moderate sedation by non-anesthesia practitioners must be classified ASA III or less.

3. Patients who are greater than ASA III or who present special considerations (i.e., mental disorders, psychosis, dementia, drug dependency and alcohol abuse requiring greater than normal medication doses for sedation) will require consultation and possible participation by the Department of Anesthesiology.

4. The physician administering moderate sedation must call the appropriate anesthesiologist as designated by the Department of Anesthesiology if the patient is greater than ASA III for a telephone consultation and verbal acknowledgment of whether he or she may proceed or whether an anesthesia practitioner should be present for the procedure. This conversation will be documented in the medical record.

VIII. ASA PHYSICAL STATUS CLASSIFICATION

Class I	Normal healthy patient. No organic, physiologic, biochemical, or psychiatric disturbance
Class II	A patient with mild to moderate systemic disturbance: may or may not be related to the reason for the procedure (e.g., controlled hypertension, diabetes, or chronic bronchitis).
Class III	A patient with severe systemic disease that is not incapacitating (e.g., poorly controlled hypertension, heart disease, insulin dependent diabetes, or pulmonary insufficiency).
Class IV	A patient with constant life-threatening systemic disturbance (e.g., cardiac failure, major organ insufficiency).
Class V	A moribund patient not expected to survive 24 hours with or without intervention. (e.g., intracranial hemorrhage in a comatose state).
E is added	If the procedure is performed as an emergency.

IX. SPECIAL SITUATIONS

A. Appropriate medical specialists should be consulted before administration of moderate sedation to patients with significant underlying conditions.

B. The choice of specialists depends on the nature of the underlying conditions and the urgency of the case.

C. An anesthesiologist should be consulted for the following patients:

1. Significantly compromised patients (e.g., severe obstructive pulmonary disease, coronary artery disease, congestive heart failure).
2. ASA Physical Status greater than Class 3.
3. Morbidly obese.
4. Significant risk of aspiration.
5. Pregnant.
6. Difficult airway.

7. If it appears likely that sedation to the point of unresponsiveness or general anesthesia will be necessary to obtain adequate conditions.

8. Practitioners who are not specifically qualified and privileged to provide moderate sedation.

9. History or symptoms of Obstructive Sleep Apnea or OSA (see next section).

X. OBSTRUCTIVE SLEEP APNEA

A. Definition of Obstructive Sleep Apnea: Obstructive Sleep Apnea (OSA) is a syndrome characterized by partial or complete obstruction of the upper airway during sleep. A cycle of light sleep, pharyngeal obstruction, arousal and light sleep can recur. Each arousal can cause sympathetic nervous system stimulation which in turn causes systemic and pulmonary hypertension. The resulting hypoxemia can cause chronic hypertension, myocardial ischemia, cardiac arrhythmias, pulmonary edema and sudden death. Respiratory considerations include difficult intubation, difficult mask ventilation, obstruction soon after extubation, and respiratory arrest.

B. OSA Patient Identification

Anatomical features of OSA include obesity (presence of increased intraluminal and extraluminal fat), micrognathia (undersized jaw) and retrognathia (posteriorally positioned tongue), large tonsils, large tongue, a BMI greater than 35 kg/m^2, increased neck circumference and nasal obstruction. If anatomical features of OSA are known to be present, the patient should be asked questions that would allow the healthcare practitioner to consider a presumptive clinical diagnosis of OSA.

1. Is there a history of apnea or snoring with hypopnea during sleep (sleep disordered breathing)?

2. Is there a history of arousal from sleep (extremity movement, turning, vocalization, snoring)?
3. Is there a history or observation of daytime somnolence?

A positive response to these three questions is consistent with a presumptive diagnosis of OSA. The diagnosis can be made based on the basis of sleep disordered breathing and daytime somnolence as arousals may not be readily apparent. **These patients should be referred to the Department of Anesthesiology when moderate sedation for a procedure is contemplated.**

C. Modified Aldrete Scoring System

1. Patients will be assessed pre-procedure, intra-procedure and post-procedure using the modified Aldrete Score.

2. During moderate sedation, all patients should score 9 or 10 or their baseline score.

3. Over sedation is defined as a Modified Aldrete score less than 8.

4. Prompt and appropriate corrective action will be immediately instituted if the Modified Aldrete score is 7 or less.

5. All post-sedation patients must have their vital signs return to within 10% of their baseline score, or be evaluated for admission to the hospital.

6. All post-sedation patients must have their Modified Aldrete Score return to baseline or be evaluated for admission to the hospital.

MODIFIED ALDRETE SCORING		
CRITERIA	**ABILITY**	**SCORE**
Activity	Able to move voluntarily or on command : 4 extremities 2 extremities 0 extremities	2 1 0
Respiration	Able to breathe and cough freely Dyspnea; shallow or limited breathing Apneic	2 1 0
Circulation	BP ± 20 mmHg of pre-sedation level BP ± 20-50 mmHg of pre-sedation level BP ± 50 of pre-sedation level	2 1 0
Consciousness	Fully Awake Arousable on calling Not responding	2 1 0
O_2 Saturation	Able to maintain O_2 saturation > 92% on room air Needs O_2 to maintain Saturation > 90% O_2 Saturation < 90% even with O_2 supplementation	2 1 0

XI. NPO GUIDELINES

A. For non-emergent cases, a licensed practitioner with moderate sedation privileges, weighing the risks and benefits of the procedure on a case-by-case basis should make the decision regarding NPO status.

B. Gastric emptying may be influenced by many factors, including anxiety, pain, narcotic administration abnormal autonomic function (e.g., diabetes), pregnancy, and mechanical obstruction. Therefore, the NPO intervals suggested below do not guarantee that complete gastric emptying has occurred.

C. Recommended NPO periods:

1. Clear liquids - 2-3 hours (e.g., water, fruit juices without pulp, clear tea, black coffee, Gatorade).

2. Light meal - 6 hours (e.g., toast and clear liquids).

3. Regular meal - 8 hours (any meat, fatty or fried foods which will delay gastric emptying).

4. NPO After midnight.

D. High-risk patients should have the standard 8-hour fasting prior to sedation when possible. These conditions may include, but are not limited to:

1. Pregnancy.

2. Obesity.

3. Diabetes.

4. Hiatal hernia.

5. Gastroesophageal reflux.

6. Ileus or bowel obstruction.

7. Possible difficult airway management.

E. When appropriate NPO intervals have not been ensured, or in the case of a valid emergency, the increased risks of sedation shall be weighed against its benefits and the lightest level of effective sedation necessary to perform the procedure

F. An emergency procedure or the presence of one of the high risk conditions listed above in numbers 1-6 may require protection of the patient's airway against aspiration before sedation (endotracheal intubation). Consultation of the Department of Anesthesiology should be considered.

XII. LOCATIONS FOR MODERATE SEDATION

A. Moderate sedation may be administered only in the following clinical areas:

1. Medical Imaging.

2. Angiography.

3. Emergency Department.

4. Special Procedure Rooms in Peri-operative Services.

5. Cardiac Diagnostics Lab.

6. Intensive Care Units.

7. GI and Endoscopy areas.

XIII. MONITORING AND RESUSCITATION EQUIPMENT

The following equipment, in good working order, must be immediately available and the sizes must be appropriate for patient age and BMI (size):

1. Pulse Oximeter.

2. Non-invasive blood pressure cuff.

3. Cardiac monitoring equipment.

4. Suction with appropriate suction catheters.

5. Oxygen supply with self inflating bag and mask.

6. Crash cart and defibrillator (including laryngoscope and blades, endotracheal tubes, oral/nasal airways, anticholinergics, pressor agents, and drug-specific reversal agents).

7. Ability to check expired CO_2.

XIV. PERFORMANCE OF PROCEDURE

A. Pre-procedure preparation:

1. Physician Responsibility

a. Ensure at a minimum that a limited history and physical exam has been performed as per medical staff policy and the patient is medically able to tolerate the medications to be administered to produce moderate sedation. This particular note is to consist of:

1) Allergies and/or previous untoward responses to same or similar medications.
2) Include an examination of the patient's oropharynx, upper airway, cardiac, pulmonary, and neurological status. The focus of the airway evaluation should be to identify characteristics that may impair or impede visualization of the glottic opening and the ability to mask ventilate These would include short neck, receding mandible, protruding maxillary incisors, limited mouth opening, limited neck extension, and a high arched palate.

b. Patient Counseling: Risks, Benefits, Expectations and Alternatives

1) Review the Risks, Benefits, Expectations and Alternatives of moderate sedation with the patient and/or the responsible parent or guardian.
2) Obtain an informed consent for the proposed procedure and the administration of moderate sedation.
3) In the presence of an emergency, staff should follow the particular institution’s standard practice or policy for treatment in the absence of consent. Additionally, documentation of the emergent nature of the

procedure should be thoroughly documented in the patient's medical record.

4) Complete the sedation/analgesia pre-procedure note. This note includes:

   a) Risks, benefits and alternatives of sedation/analgesia and the proposed procedure were discussed with the patient and accepted.
   b) No significant medical changes in the patient's condition have occurred since the H&P was completed or documentation of any changes is done to update the medical record prior to the procedure.
   c) The ASA Physical Status.
   d) The patient is an appropriate candidate to undergo the planned procedure and moderate sedation.
   e) The moderate sedation plan to be used.
   f) Immediate assessment of the patient's airway status is documented.

5) Write pre-procedure orders as needed, including specific drug, dose, and route of administration. (Physician Order Sheet)
6) Perform **time out** to verify the site (including laterality) immediately prior to the procedures.
7) Remain physically present during the moderate sedation when the licensed practitioner is administering the moderate sedation.

2. Registered Nurse Responsibility

a. Verify the presence of a current:

   1) History and Physical which includes an airway exam.
   2) Pre-procedure note that includes documentation of ASA physical status classification.
   3) A signed Surgical/Procedural Consent for moderate sedation.

b. Document the NPO status.

c. Complete the nursing assessment which includes the following:

   1) Baseline level of sedation.
   2) Ability of the patient to understand the risks, benefits and alternatives of sedation.
   3) Anxiety level.
   4) Vital signs (including temperature and pain assessment).
   5) Skin color and condition.
   6) Sensory deficits.
   7) Current medications and drug allergies.
   8) Relevant medical/surgical history, including substance abuse.
   9) Patient perceptions regarding procedure and moderate sedation.

d. Establish patent intravenous infusion. Maintain vascular access throughout the procedure and document patency.

e. Ensure proper placement of an appropriately sized blood pressure cuff, pulse oximeter, and EKG monitoring equipment.

f. Ensure proper administration of oxygen via nasal cannula/mask per physician or as appropriate.

g. Remain with the patient from the time sedation is initiated.

B. Intra-Procedure

1. The patient is to be continuously monitored and evaluated throughout the procedure by a licensed practitioner using an EKG, pulse oximeter, blood pressure cuff and patient interaction to establish a level of consciousness, tolerance of the procedure, sedation and pain scale.

2. The registered nurse administering the sedation and doing the monitoring should not be part of the procedural team or used as an assistant.

3. All vital signs and assessments are to be documented not less than every 5 minutes on a Moderate Sedation Flow Sheet.

4. If a licensed practitioner is giving sedation, he/she will report immediately to the supervising physician any sudden and/or significant changes in monitoring parameters, and this event should be documented on the Moderate sedation flow sheet. For the adult and children 12 years and older, this would include:

a. Respiratory rate less than 8 or greater than 24 per minute.

b. Heart rate plus or minus 15 per minute from baseline.

c. Systolic blood pressure or diastolic blood pressure plus or minus 15 mm Hg from baseline.

d. O_2 saturation equal to or less than 93% despite administration of supplemental O_2.

e. Modified Aldrete score of less than 8.

C. Post-Procedure

1. A clinically competent nurse in an appropriate location (PACU, ED or ICU for adults, and children over 12) will recover all patients receiving moderate sedation for a minimum of 30 minutes by the following criteria:

a. Monitor patient as was done during procedure. Document vital signs, sedation score and pain scale appropriate for age every 15 minutes for the first hour; if stable decrease to every hour or as ordered by the physician or designee. Document return of sedation score to baseline.

b. Administer supplemental O_2 as needed until recovery from medication is complete.

c. Physician or responsible practitioner will evaluate patient and write specific discharge orders. The recovery period extends from completion of the procedure until a responsible provider documents that the patient has sufficiently recovered from the effects of the medication, including level of

consciousness (using the Modified Aldrete Score) and vital signs. A responsible adult must accompany outpatients to their home, and written discharge instructions must be given to the patient.

XV. QUALITY ASSURANCE AND RISK MANAGEMENT

A. All of the following events shall be referred to the Department of Anesthesiology quality assurance committee (or other appropriate performance improvement committee) for evaluation.

1. Unplanned admission.
2. Cardiac arrest.
3. Use of reversal agents.
4. Use of assistance with ventilation (Ambu bag).
5. Prolonged periods of oxygen desaturation (<85% for 3 minutes).
6. Failure of the patient to return to within 20% of pre-procedure vital signs.
7. Use of doses of sedatives/analgesics outside the recommended dosages.

DOSAGE RECOMMENDATIONS

MEDICATION	ADULT/OLDER CHILD	GERIATRIC	COMMENTS
Midazolam (Versed) Dilute to 1 mg/cc	Incremental doses of 1 mg to effect not to exceed a total dose of 5 mg	Incremental doses of 0.5 mg to effect not to exceed a total dose of 2 mg	Onset: 1-2 min. Duration: 30 min. IV push slowly. Reversal with Flumazenil if respiratory depression occurs.
Fentanyl (Sublimaze)	Incremental doses of 25-50 mcg to effect not to exceed a total dose of 2 mcg/kg/hour or 250 mcg/hour	Incremental doses of 25 mcg to effect not to exceed a total dose of 2 mcg/kg/hour or 200 mcg/hour	Onset: I min. Duration: 30 –60 min. IV push slowly. Risk of skeletal and thoracic muscle rigidity with rapid injection. Risk of respiratory depression. Reversal with Naloxone if respiratory depression occurs.
Hydromor-phone (Dilaudid)	Incremental doses of 0.2 mg – 0.5 mg not to exceed a total dose of 2 mg	Incremental doses of 0.1 mg – 0.3 mg not to exceed a total dose of 1.5 mg	Onset: 3 – 5 min. Duration: 2 – 4 hours Risk of respiratory depression. Reversal with Naloxone if respiratory depression occurs Keep patient in Recovery for at least 45 minutes after last dose. Watch for delayed respiratory depression

Morphine Dilute to 1 mg/cc	Incremental doses of 1 mg to effect not to exceed a total dose of 0.15 mg/kg	Incremental doses of 0.5 mg to effect not to exceed a total dose of 0.15 mg/kg	Onset: 5-10 min. Duration: 2-4 hrs. Use fluids and trendelenburg position if hypotension occurs. Risk of respiratory depression. Reversal with Naloxone if respiratory depression occurs. Keep patient in Recovery for at least 45 minutes after last dose. Watch for delayed respiratory depression

Propofol, Etomidate and barbiturates are general anesthetics and are not intended for use by non-anesthesia trained practitioners for the purpose of achieving sedation and/or analgesia during procedures. The use of Propofol, Etomidate and barbiturates is limited only to those individuals who have been granted specific privileges for their use by the Medical Staff.

REVERSAL AGENTS

Adults		
Agents	**Typical Dose**	**Typical Frequency**
Flumazenil (Romazicon) ®	0.2 mg	Q 1 minute up to 1 mg
Naloxone (Narcan) ®	40-400 mcg	Q 1minute up to 0.4 mg

COMPETENCY MODULE

TOPIC: Adult Moderate Sedation

COMPETENCY STATEMENT:
Physician or Registered Nurse is able to safely perform / can utilize professional judgment and critical thinking skills in the performance of Adult Moderate sedation using proper procedure
Definitions: ***Adult Moderate sedation: administered to individuals ≥ 12 years of age requiring procedural sedation.***

Name: (print)_____**Date Completed**_____

Type of Validation: ☐ Initial ☐ Review **Evaluation/Validation Methods:** **V=**Able to verbalize understanding **O=**Direct Observation/Return demo **R=**Reviewed references/resources **C=**Completed learning activity	**Assessment/Level of Competency** **NA=**Not applicable/no expectation **1 =** Unable to perform **2 =** Performs with assistance **3 =** Performs independently **4 =** Can teach or mentor others

BEHAVIORAL CRITERIA	Validator Initials & Date	Validation Code/ Assessment Comments
I. Preparation		
A. Is able to correctly identify appropriate candidate for adult moderate sedation 1. Patients ≥ 12 years of age requiring procedural sedation B. Able to verbalize characteristics and examples of patients not suitable for sedation by a non-anesthesiologist practitioner C. Identifies desired outcomes and potential complications of moderate sedation D. Insures proper environmental circumstances for administration of Adult Moderate Sedation 1. Location 2. Proper support equipment 3. Emergency training E. Able to verbalize criteria for different levels of sedation		
II. Patient Assessment		
A. Ensures current History and Physical are present B. Confirms American Society of Anesthesiologists (ASA) Physical Status Scoring System score ≤ 3 C. Ensure patients fall within NPO recommendations D. Fully completed consent E. Able to verbalize procedure for resolution if disagreement exists as to appropriateness of patient of contemplated procedure and/or moderate sedation F. Communicate with patient to offer reassurance throughout care		

BEHAVIORAL CRITERIA	Validator Initials & Date	Validation Code/ Assessment Comments
III. Equipment/Pharmacologic Agents		
A. Identifies and demonstrates use of emergency equipment for moderate sedation 1. Crash cart 2. Pulse oximetry 3. Bag-Valve Mask ventilation equipment 4. Cardiac monitoring equipment B. Verbalizes dose, effect, side effects and nursing management related to the following agents: 1. Midazolam (Versed) 2. Fentanyl 3. Hydromorphone (Dilaudid) 4. Morphine 5. Naloxone 6. Flumazenil (Romazicon)		
IV. Monitoring		
A. Verbalizes/performs pre-sedation monitoring 1. Confirms patient identity and procedure 2. Baseline vital signs 3. Baseline general assessment 4. Baseline Modified Aldrete Score 5. Baseline pain scoring and characteristics 6. Baseline level of consciousness 7. Results of appropriate lab studies reviewed 8. Allergies 9. NPO status 10. Initiates / verifies patent IV access 11. Sedation and reversal agents available 12. Proper emergency equipment is available and operational B. Verbalizes/performs intra-procedure monitoring 1. Assesses LOC 2. Utilizes Modified Aldrete Scoring System 3. Assesses Pain 4. Evaluates response to interventions and medications 5. Vital signs every 5 minutes		

BEHAVIORAL CRITERIA	Validator Initials & Date	Validation Code/ Assessment Comments
C. Verbalizes/performs post-procedure monitoring 1. Monitors vital signs 2. Assesses LOC 3. Utilizes Modified Aldrete Scoring 4. Performs pain assessment 5. Post procedure physical assessment 6. Documentation of procedure site status 7. Return to baseline 8. Discharge criteria met		
V. Documentation		
A. Documentation is complete and accurate 1. Moderate sedation – analgesia flow sheet a. Pre-procedure b. Intra-procedure c. Post-procedure d. Notes / Comments section as applicable e. EKG strips f. Discharge criteria met g. Discharge interventions 2. Ensures ASA score is present in chart and ≤ 3 3. Ensures current history and physical is present in chart 4. Modified Aldrete Scoring Pre-, intra- and post-procedure 5. Any adverse events are referred to anesthesia quality assurance or other appropriate performance improvement committee		

References

The ASA and CSA have produced many documents related to the topic addressed by these guidelines, among them are the following:

1. Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists, *Anesthesiology* 2002: 96; 1004-1017.
2. Continuum of Depth of Sedation ; Definition of General Anesthesia and Levels of Sedation/Analgesia (ASA HOD 2004, amended 2009).
3. Distinguishing Monitored Anesthesia Care (MAC) from Moderate Sedation/Analgesia (Conscious Sedation) (ASA HOD 2204, amended 2009).
4. Statement on Granting Privileges for Administration of Moderate Sedation to Practitioners who are not Anesthesia Professionals (ASA HOD 2005, amended 2006).

5. CSA Guidelines for Deep Sedation by Non-Anesthesiologists (CSA HOD May 2008).
6. Practice Guidelines for Preoperative Fasting and the Use of Pharmacologic Agents to Reduce the Risk of Pulmonary Aspiration: Application to Healthy Patients Undergoing elective Procedures (AS HOD 1998).

May 29, 2010