SAN FRANCISCO GENERAL HOSPITAL
EMERGENCY DEPARTMENT

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PROTOCOL TITLE: SEDATION – USE OF SEDATION IN THE ED

Purpose: To delineate the practice standards for patients undergoing sedation and recovery in the Emergency Department (ED) at San Francisco General Hospital and to ensure the performance of safe and effective diagnostic and therapeutic procedures. These practices are consistent with SFGH Administrative Policy Number 19.8 *Moderate Sedation Guidelines*.

Definitions:

Minimal Sedation (Anxiolysis) is a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are unaffected.

Moderate Sedation/Analgesia (previously referred to as conscious sedation) is a drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation (reflex withdrawal from a painful stimulus is not considered a purposeful response). No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

Deep Sedation/Analgesia is a drug-induced depression of consciousness during which patients

cannot be easily aroused but respond purposefully following repeated or painful stimulation (reflex withdrawal from a painful stimulus is not considered a purposeful response). 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. Physicians administering deep sedation must be privileged to perform endotracheal intubation and clinical management of hemodynamic instability.

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 often impaired. Patients often require 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.

Statement of Policy:

1. Sedation is produced by the administration of pharmacological agents that results in a medically-controlled depressed level of consciousness, as a continuum. The proper use of sedation allows for a safe and effective approach to brief medical or surgical procedures, such as laceration repair, fracture or joint reduction, or other painful procedures.

2. Sedation administration and monitoring will be performed by qualified physicians and emergency RNs who have current knowledge and skills for performing the procedure, sedation management, and emergency care appropriate for the age, weight/size of the patient.

3. Sedation will be performed in the ED's treatment rooms equipped with appropriate age/size specific monitoring and resuscitative equipment.

4. A physician privileged for Moderate Sedation Administration and a RN who are competent in age-appropriate basic life support and emergency airway management, will be in attendance until the procedure is completed. If the patient receives deep sedation, the Attending Physician must also be privileged to perform endotracheal intubation. The RN will have the primary responsibility of monitoring the patient's vital signs and level of consciousness and will be immediately available to the patient until there is a satisfactory recovery from the acute effects of the sedation agents.

5. An Attending Physician will be physically present at the patient's bedside, for the administration of sedating drugs and when redosing of drugs is required.

6. It is the responsibility of the ED's Chief and Director of Nursing or designees to ensure that staff is competent in the management of patients undergoing sedation and

that the Performance Improvement Process is used to monitor compliance with this policy.

Equipment:

Age/size-specific equipment is required and will be readily available:

1. Oxygen source with oxygen flow meters, and oxygen delivery devices (nasal cannula, masks)
2. Adult/pediatric crash cart (as appropriate) and/or resuscitation supplies
3. Self-inflating resuscitation bag
4. Functioning suction source
5. Defibrillator
6. Emergency airway equipment (masks, airways, and laryngoscopes with blades of appropriate size)
7. Electrical outlet connected to emergency power supply or emergency equipment with battery powered back-up capability
8. Monitoring equipment including:
   a) pulse oximeter
   b) automated blood pressure monitor or sphygmomanometer and cuff
   c) electrocardiogram monitor
9. Reversal agents (naloxone and flumazenil)

Procedure

I. **Pre-procedure Patient Evaluation and Assessment**

A. An appropriate pre-procedure evaluation will be performed and documented in the medical record by the physician, and include:

1. A judgment as to the appropriateness of the procedure and safety of sedation for the particular patient, that includes consideration of the patient's age, medical condition, and the procedure's side effects and risks.
2. The patient's medical, anesthetic, allergy, and drug history.
3. Physical examination (including evaluation of mouth opening and neck flexibility).
4. The patient's American Society of Anesthesiologist (ASA) physical status (See Appendix A).
5. The patient's nothing by mouth (NPO) status:
   The following are the minimum guidelines that apply to otherwise healthy patients, however, it is recognized that for certain emergency or urgent procedures, the guidelines may not be feasible:

   a. Patients two years old or less: NPO for solids for six hours
      NPO for clear liquids (including

breast milk) for three hours

b. Patients greater than two years old: NPO for six hours

6. Diagnostic data, as appropriate

B. The RN performs and documents in the Sedation Record (see Appendix B) an appropriate pre-procedure assessment including respiratory rate, oxygen saturation, blood pressure, cardiac rate and rhythm, and level of consciousness.

C. Informed consent for the procedure *and* sedation will be obtained and documented by the physician, with consideration of:
1. what the procedure entails
2. alternative options, if they exist
3. the benefits and potential risks of the procedure and sedation

D. Procedure-appropriate patient education will be given and documented, and include, but not be limited to:
1. Orientation to the procedure and equipment
2. Review of pain scale and how it is used
3. NPO status
4. Necessity of an escort for discharge to home

II. Medication Administration and Monitoring Parameters

A. Patients undergoing sedation must have approval from the ED Attending prior to administration

B. Intravenous access will be established and maintained when IV procedural sedation and analgesia is provided. The ability to obtain IV access when sedation is provided by intramuscular, oral, nasal, or rectal drug administration must be assured.

Patient will be placed in a treatment room and be monitored as described below:

1. Vital signs (blood pressure, pulse, respiration), level of consciousness and/or responsiveness to verbal and light tactile stimuli, continuous cardiac rhythm, and continuous pulse oximetry, will be assessed by a RN
2. Advanced life support equipment and reversal agents are readily available
3. Intravenous access is secured when IV medications are used prior to medication administration and oxygen by face mask or nasal cannula is administered
4. The patient is continually monitored by a RN throughout the procedure, as well as the recovery phase
5. A physician not performing the procedure trained in airway management including endotracheal intubation (ED Attending Physician) is continually present throughout the procedure and until the patient responds purposely to tactile

stimulation or verbal commands

6. A RN is with the patient until the patient is awake and alert or reaches their pre-sedation level of consciousness

III. Emergency Measures for Cardiopulmonary Depression

A. Open airway using head tilt/chin lift method (jaw thrust if trauma is suspected)
B. Suction airway as needed.
C. Support ventilation with self-inflating resuscitation bag
D. Stat page ED Attending Physician and Anesthesia (1-180-341, 1-180-233) for further resuscitative measures, including emergency airway management (laryngoscopy, cricothyrotomy)
E. Administer reversal agents as prescribed

IV. Monitoring Timeframes and Documentation

A. Monitoring and documentation of the monitoring parameters are required:
   1. Before drug administration
   2. At least 5 minutes following the initial administration of the sedation agent
   3. At least every 5 minutes thereafter
   4. Upon completion of procedure
   5. During recovery and at the time of discharge
   6. More frequently in patients with significant medical problems or unique risk as determined by the physician

B. Drug administration during the procedure:
   1. Dosages will be individualized according to the patient age, weight, history, physical condition, clinical presentation, mental status, nature of procedure, and desired effect
   2. Dosages will be titrated to the patient's response using small incremental doses. Dosages may be reduced when using more than one drug.
   3. All drugs and intravenous fluids administered will be documented

C. The physician will complete a procedural note in the patient's medical record

D. Unusual events or post-procedure complications and their management will also be documented

E. Post-procedure monitoring will continue until the patient has returned to his/her pre-procedural baseline

F. The guidelines for sedation of the pregnant patient should be followed as above, keeping in mind changes in maternal oxygenation and blood flow critically affect the fetus. (Goal: oxygen saturation $\geq$ 95% and Mean Arterial Pressure (MAP) > 65 mm Hg.

V. Discharge of the Patient

A. The patient is discharged home by order from the Attending Physician when all of the following occur:

1. level of consciousness returns to pre-procedure assessment level
2. vital signs are within normal limits for that patient
3. the respiratory status is not compromised
4. pain and discomfort have been addressed
5. there are no new signs, symptoms or problems
6. there is minimal nausea
7. patient is able to ambulate at pre-injury baseline
8. patient is not at risk for re-sedation because a reversal agent was administered

B. The patient is given written post-procedural instruction including:

1. information about the medications administered the their side effects
2. eating precautions post-procedure
3. return appointment information if applicable
4. a 24 hour emergency telephone number so the patient may obtain assistance with post-procedural problems

VI. Education and Training

1. New nursing staff caring for patients undergoing sedation in the ED, will be oriented to the procedure. Initial validation of competency will focus on knowledge base and be evaluated and documented.
2. All staff will be evaluated annually through performance appraisal process and competency education day.
3. Ongoing training will be provided in collaboration with Departmental Managers in response to needs identified through performance improvement monitoring, performance appraisals, and changes in practice

VII. Performance Improvement (PI) Monitoring

The ED's PI Committee will monitor the following indicators as part of the PI program:

1. All cases in which assisted ventilation is required
2. All cases in which unanticipated hospital admission or increased level of care is required
3. All cases in which there is a hemodynamic instability that requires intervention
4. All cases in which reversal agents are administered
5. All cases of failed sedation

File name: Sedation.doc

ATTACHMENT A: ASA Physical Status

ATTACHMENT B: SEDATION RECORD

ATTACHMENT C: SEDATION DISCHARGE INSTRUCTIONS