SUBJECT: ADMINISTRATION OF MINIMAL SEDATION FOR DIAGNOSTIC OR THERAPEUTIC INTERVENTIONS

POLICY

Patients requiring minimal sedation for the purpose of a diagnostic or therapeutic intervention at the Good Shepherd Penn Partners Specialty Hospital (GSPP) will have the sedation administered in accordance with this policy. Individuals directing or providing minimal sedation must comply with this policy.

PURPOSE

The purpose of this policy is to establish facility-wide standards for the administration and monitoring of minimal sedation for diagnostic and therapeutic interventions.

SCOPE

This policy applies to administration of oral or intravenous sedation/analgesic agents to produce sedation to facilitate diagnostic or therapeutic interventions (i.e. fiberoptic bronchoscopy). This would include patients with tracheal airways who may have been or are currently mechanically ventilated.

Exceptions to this policy are as follows:
1. Patients receiving medications for analgesia or anxiolysis unrelated to procedure are not within the scope of this policy.
2. Patients receiving medications for sedation or anxiolysis prior to a diagnostic test in radiology (i.e. CT scan or MRI) are not within the scope of this policy.
3. Patients undergoing procedures for life-threatening emergencies are not within the scope of this policy.
4. The administration of General Anesthesia is not within the scope of this policy.

DEFINITIONS

A. General Definitions
1. Diagnostic or Therapeutic Intervention: Any intervention that requires the administration of sedation and/or analgesia to facilitate a procedure involving puncture or incision of the skin, manipulation of bones or joints, or insertion of an instrument or foreign material into the body including but not limited to anesthesia procedures, percutaneous aspiration, biopsies, cardiac and vascular catheterizations, endoscopies, angioplasties and implantations, peripherally
inserted central catheter (PICC) and central line insertion, fiberoptic bronchoscopy.

B. Levels of sedation/analgesia: The American Society of Anesthesiology defines four levels of sedation/analgesia. Because sedation is a continuum, it is not always possible to predict how an individual patient will respond. Hence, sedation providers intending to produce a given level of sedation should be able to care for patients whose level of sedation becomes deeper than initially intended:

1. Minimal sedation: 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.

2. Moderate sedation/analgesia: A drug-induced depression of consciousness during which patients respond purposefully to verbal commands either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is minimally affected.

3. Deep sedation/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 not be adequate. Cardiovascular function is minimally affected.

4. General anesthesia: 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.

IMPLEMENTATION

It is the responsibility of the Medical Board, Chairs, Clinical Directors, Program Directors, Nursing Directors and the Chief Nursing Officer to assure that any personnel involved in assessing, administering, monitoring and discharging a patient receiving minimal sedation will comply with this policy.

PROCEDURE
A. Any provider performing minimal sedation will:
   1. Have emergency equipment and medication available.
      - Adequate oxygen source
      - Self-inflating resuscitation bag
      - Working suction and suction catheters
      - Pulse-oximetry
   2. Provide access to additional emergency personnel if necessary see policy # G 1-12-13 “Clinical Emergency Response System for Cardiopulmonary Arrest and Other Clinical Emergencies”.
   3. Assess the patient’s physical status, level of consciousness, and vital signs immediately prior to administering sedation.

B. Patient Identification
Patients undergoing an invasive procedure will be appropriately identified according to policy “Patient Identification” # G 1-12-40 to assure correct patient and correct procedure. Patients who will need sedation for their procedure should be identified before the procedure begins. The risks and benefits of sedation should be reviewed with the patient as part of the consent process for their procedure.

C. Drug Administration
1. Supplemental oxygen should be routinely used.
2. Intravenous access should be established.
3. Continuous pulse oximetry should be utilized.
4. Continuous End Tidal Carbon Dioxide may be utilized.
5. Sedation medications for minimal sedation should be dosed incrementally and titrated to the desired effect. (See Educational Guidelines on “Recommended Medications for Sedation/Analgesia”).
   a. All sedation/analgesia medication should be dosed for the intended effect in relation to other medications the patient is currently receiving.
   b. IV medications should be dosed to accommodate for the potentiating effects of different classes of sedation medications given in combination.
   c. For minimal sedation a single class of agent should be administered at the recommended doses for age. (See Educational Guidelines on “Recommended Medications for Sedation/Analgesia”).
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Table: Summary of Minimal Sedation

<table>
<thead>
<tr>
<th>Minimal Sedation</th>
<th>Sedation Goal</th>
<th>Cardiovascular Function</th>
<th>Provider Ordering Sedation</th>
<th>RN (Registered Nurse) Assisting with Sedation</th>
<th>Available Equipment in the room</th>
<th>Sedation Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients respond normally to verbal commands</td>
<td>Unaffected</td>
<td>Any provider (Medical Doctor, Nurse Practitioner, Physician Assistant) with medication ordering privileges at our facility may order minimal sedation</td>
<td>RN</td>
<td>Adequate oxygen source Self-inflating resuscitation bag* Working suction/suction catheters</td>
<td>Single Class of drug may be used</td>
</tr>
</tbody>
</table>

D. Post-procedure monitoring
1. Following sedation, patients should be observed until they have returned to near their base-line level of consciousness.
2. Oxygenation should be monitored periodically until patients are no longer at risk for hypoxemia.
3. Ventilation and circulation should be monitored at regular intervals.
4. During post-procedure observation, the frequency of monitoring will be written in the post-procedure orders, or as per established post-sedation monitoring protocol within the unit.
5. Documentation will be recorded on the appropriate time based post-procedure documentation form that is part of the patient’s medical record.
6. Notification of any significant change in the patient’s hemodynamic, neurologic, or pulmonary status will be communicated to the Sedation Provider and documented in the medical record.

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REFERENCE

Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists (Approved by the House of Delegate October 25, 1995 and last amended on October 17, 2001). An updated report by the American Society of Anesthesiologists, Task Force on Sedation and Analgesia by Non-Anesthesiologists

Anesthesiology 96: 1004-1017, 2002 American Society of Anesthesiologists Lippincott Williams & Wilkins, Inc.

DATE

Supersedes: NA

Effective Date: December 13, 2018

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### APPENDIX A

**Recommended Minimal Sedation Doses for IV medications**

<table>
<thead>
<tr>
<th></th>
<th>Age 18-40</th>
<th>Age 40-65</th>
<th>Age 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fentanyl</strong></td>
<td>25 -50 mcg may be repeated once</td>
<td>12.5 - 25 mcg may be repeated once</td>
<td>12.5 mcg may be repeated once</td>
</tr>
<tr>
<td>(narcotic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Midazolam</strong></td>
<td>0.5-0.75 mg may be repeated once</td>
<td>0.25-0.5 mg may be repeated once</td>
<td>0.25 mg may be repeated once</td>
</tr>
<tr>
<td>(benzodiazepine)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hydromorphone</strong></td>
<td>0.4-1mg may be repeated once</td>
<td>0.2-0.4 mg may be repeated once</td>
<td>0.2 mg may be repeated once</td>
</tr>
<tr>
<td>(narcotic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lorazepam</strong></td>
<td>1- 1.5 mg may be repeated once</td>
<td>0.5-1 mg may be repeated once</td>
<td>0.25-5 mg may be repeated once</td>
</tr>
<tr>
<td>(benzodiazepine)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morphine</strong></td>
<td>3-6 mg may be repeated once</td>
<td>2-3 mg may be repeated once</td>
<td>2mg may be repeated once</td>
</tr>
<tr>
<td>(opioid)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Doses should be based on ideal body weight
- One class of agent is permissible for minimal sedation
- At a minimum continuous pulse oximetry should be used from the time of administration until return to baseline level of consciousness.
- Patients at high risk for airway obstruction or with history of sleep apnea should be given 0.5-0.75 the recommended starting dose
- Patients with severe pulmonary and/or cardiovascular disease should have doses reduced as appropriate based on clinician judgement.

July 2016

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