Subject: Moderate (Conscious) Sedation

Policy: Conscious sedation will be ordered by a physician and the patient continuously monitored by competent RN or physician. Conscious sedation may be delivered in the location most appropriate to the needs of the patient.

Purpose: To establish a standard regarding a medically controlled state of depressed consciousness that allows maintenance of protective reflexes, retain the patient’s ability to maintain patent airway independently and continuously and permits appropriate response by the patient to physical stimulation or verbal command.

Additional Information:

1. **Levels or type of sedation:**

   Regardless of the intended level of sedation or route of administration, the sedation of a patient represents a continuum. The intended level of sedation may not always be obtained or maintained. Appropriate management may vary in a given situation.

   **Minimal Sedation** (Auxiolysis): A drug induced state during which patients respond normally to verbal commands. This level of sedation may impair cognitive function and coordination minimal sedation does not affect ventilatory or cardiovascular function. See policy: Care of Patients 4:76 Procedural Sedation (Minimal Sedation).

   **Moderate Sedation**/Analgesia (Conscious Sedation): A drug induced state during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patient airway and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

   **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 be inadequate. Cardiovascular function is usually maintained.

   **General Anesthesia**: 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 maintaining a patent airway and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug induced depression of neuro-muscular function. Cardiovascular function may be impaired.
2. Conscious sedation is produced by the administration of pharmacological agents. Conscious sedation includes all of the following:
   a. Alteration of mood.
   b. Maintain own airway.
   c. Cooperation.
   d. Elevating the pain threshold.
   e. Minimal variation of vital signs.
   f. Provide some degree of amnesia
   g. A safe and rapid return to pre-sedation state.
3. As sedation-to-anesthesia is a continuum, it is not possible to predict the individual’s response to pharmacological agents. Therefore, an ACLS RN will be responsible for the monitoring needs of the patient. The ACLS RN will not engage in other tasks that would interfere with monitoring. An ACLS RN will be one who bi-annually reviews conscious sedation policy, equipment and medications. This competency will include review of the cardiac or respiratory arrest, CNS depression, hemodynamic instability (rapid or slow heart rate or hypotension.) This competency review will be maintained in the competent RN Education/Personnel file.
4. A physician will order the type of sedation required prior to the procedure for all patients, whether in-patient or out-patient. The physician will have completed a pre-procedure evaluation. Consent must be obtained for the procedure after risks, benefits and alternatives have been explained to the patient, and the patient is an appropriate candidate for the planned conscious sedation. The physician will be present in the facility during the procedure and until the patient is considered stable.
5. For significantly compromised patients, if a concern is voiced by the competent RN or physician, the condition may be discussed with the anesthesiology department before conscious sedation is given.
6. If conscious sedation is to be done in a non-nursing area it is that department’s responsibility to monitor patient by ACLS RN during and post procedure until discharge. The Nursing Director/Associate Director can coordinate care for the patient if necessary.
7. Documentation will include a pre-procedure assessment, appropriate consents, an intra-procedure record, and post-procedure data.
8. An ACLS RN may monitor the patient if the following criteria are met.
   a. The surgical, diagnostic or therapeutic procedure is considered to be minimal risk.
   b. The physician is responsible for all management of complications that may occur during the procedure.
   c. The patient retains the ability to independently and continuously maintain a patent airway. The patient must respond appropriately to physical stimulation and/or verbal command.
9. Procedures that may require Conscious Sedation: Types and Location
   Certain surgical, diagnostic, or therapeutic procedures may utilize conscious sedation. Location where sedation is performed depends upon the patient status and the procedure. Any area where conscious sedation is performed will have the same equipment, qualified personnel, medication, monitoring and evaluation.
Equipment List:
- Oxygen/Oxygen delivery devices
- Suction apparatus
- Noninvasive blood pressure device
- Electrocardiograph
- Pulse oximeter
- Code cart in close proximity

Procedure:

A. Pre-procedure assessment and tasks
   1. Pre-procedure assessment must be in the chart prior to the procedure. Documentation that the patient has had the risks of the procedure and conscious sedation adequately explained, indications for the procedure, and assessment of the patient’s ability to maintain an airway and to assess and document the range of motion of the neck. The record shall also include current medications and dosages, and any allergies.
   2. Documentation of assessment and tasks for out-patients, a pre-op checklist for in-patients and a conscious sedation pre-procedure evaluation will be filled out prior to the procedure.
   3. NPO status shall be the same as for surgical patients, an exception will be the Emergency Department that may not meet the NPO requirements prior to sedation. It is the responsibility of the Emergency Department physician to use the least amount of sedation to perform the desired procedure.
   4. The physician is responsible to explain the risks involved in the procedure and in the use of conscious sedation. The nurse’s responsibility is to reinforce the teaching.
   5. IV access is required with an exception for certain pediatric procedures.
   6. Pre-procedure vital signs, oxygen saturations and level of consciousness are recorded.
   7. Pre and post-procedure instructions are given verbally and in writing.

B. Intra-procedure Monitoring and Tasks
   1. During the procedure, the ACLS RN will monitor the patient. The RN will provide appropriate monitoring during and following the procedure. The RN will be competent in managing complications of sedation used.
   2. Antagonist drugs must be at the bedside during the procedure – Narcan and/or Flumazenil.
   3. The physician must be present in the facility during the administration of the medication and until the patient is considered stable.
   4. Monitor and document every 5-15 minutes and prn to include and document:
      - Signs or symptoms of an allergic reaction.
      - Level of consciousness.
      - Medications given.
      - Vitals signs.
      - Oxygen saturations.
      - Cardiac rhythm will be documented on the chart at the start of the procedure and at the end of the procedure changes in rhythm during procedure will be documented and treated as necessary.
      - Interventions, routine care or untoward sequelae and their outcomes.
      - Patient tolerance of procedure.

C. Emergency Management:
   If a patient loses protective reflexes, CPR will be instituted immediately.
D. Discharge Criteria:
1. Following the procedure check vitals every 5-15 minutes until stable.
2. Offer fluids by mouth post-procedure if appropriate according to physician’s routine protocol.
3. Post-sedation status will meet the following criteria before the patient is transferred to general nursing floor. A score of 8 for 20-30 minutes will be acceptable for adults. A score of 6 for 20-30 minutes will be acceptable for pediatric patients.

Response:
- Awake 2
- Arousable to name, shaking pain 1
- Non-responsive 0

Color:
- Pink 2
- Pale, dusky 1
- Cyanotic 0

Blood Pressure:
- Plus or minus 20% 2
- Plus or minus 20-50% 1
- Plus or minus 50% 0

Respirations:
- Able to cough and deep breathe 2
- Good airway limited breathing 1
- Apnea or obstructed 0

4. \( \text{SAO}_2 \geq 95\% \) or greater unless otherwise indicated by pre-sedation levels.
5. Patients will be observed at least 30 minutes after the last dose of medication.
6. Patients will meet discharge criteria guidelines for out patient surgery prior to discharge.
7. Review the post-sedation discharge instructions with patient/responsible adult.
8. Insure that follow up appointments have been made and are understood.
9. Answer questions or concerns or refer to physician if necessary.

E. Safety
1. Accompany patient on transport from one area to another.
2. Monitor infusion for patency and fluid volume delivered.
**Documentation:**

Conscious Sedation Adult/Pediatric Form.
OR Intra operative nursing record may be used in the perioperative area.

Medications should be documented on MAR, CPSI, or ER triplicate depending on patient’s admission status.

**References:**
1. American Society of Anesthesiologists; Practice Guidelines for Sedation and Analgesia by Non Anesthesiologists; April 2002 Vol 96 No4.
3. JCAHO-CAMH Update 2002; Care of Patients, Standards, Intent Statements for Anesthesia Care pages 12-16.
## APPENDIX I
Adult Conscious Sedation – I.V.

<table>
<thead>
<tr>
<th>DRUGS</th>
<th>DOSAGE &amp; ADMINISTRATION</th>
<th>ONSET</th>
<th>DURATION</th>
<th>USES</th>
<th>PRECAUTION/SIDE EFFECTS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diazepam</td>
<td>2-15 mg IV (may require up to 20 mg)</td>
<td>1-5 min</td>
<td>15 min to 1 hour</td>
<td>Administer slowly by IV injection to avoid the possibility of venous thrombosis and phlebitis, as well as apnea. Caution should be observed in patients with hepatic or renal insufficiency. Severe HYPOTENSION, BRADYCARDIA and CARDIAC ARREST can occur following rapid IV injection. Injection at rates greater than 5 mg/min should be avoided. Rapid administration of normal saline (1 ml/mg diazepam) following diazepam administration may reduce diazepam induced thrombophlebitis.</td>
<td></td>
<td>Flumazenil (Romazicon) 0.2 mg over 30 seconds-still not effective 0.5 mg q 1 minute up to 3 mg cumulative dose</td>
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<tr>
<td>Pediatric</td>
<td>0.1-0.2mg/kg IV</td>
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<tr>
<td>Fentanyl</td>
<td>1-2 mcg/kg IV</td>
<td>IV-3-5 minutes</td>
<td>IV-30-60 minutes</td>
<td>The initial dose of fentanyl should be appropriately reduced in elderly and debilitated patients. Fentanyl may produce BRADYCARDIA, which may be treated with atropine. Central nervous system (CNS) depressants, such as barbiturates, benzodiazepines, opiates, tranquilizers, tricyclic antidepressants, general anesthetics, have additive or potentiating effects when used concomitantly with fentanyl; when patients receive such drugs, the effective dose of fentanyl will be less than usual.</td>
<td></td>
<td>Naloxone (Narcan) 0.1-0.2 mg IV at 2 to 3 minute intervals until desired response obtained</td>
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<tr>
<td>(Sublimaze)</td>
<td>50mcg/ml</td>
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<tr>
<td>Meperidine</td>
<td>25-75 IV</td>
<td>5-30 minutes</td>
<td>2-4 hours</td>
<td>Physician to determine dosage. Studies suggest caution of MEPERIDINE use in patients with cirrhosis, especially when prolonged (repeated dosing) analgesia is required, due to drug accumulation. Dosage adjustment of MEPERIDINE is suggested in the elderly and in patients receiving other CNS depressants like the phenothiazines. MEPERIDINE should be used with caution in patients having impaired respiratory function and in those predisposed to convulsions.</td>
<td></td>
<td>Naloxone (Narcan) 0.1-0.2 mg IV at 2 to 3 minute intervals until desired response obtained</td>
</tr>
<tr>
<td>(Demerol)</td>
<td>5-10mg IV</td>
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<tr>
<td>DRUGS</td>
<td>DOSAGE &amp; ADMINISTRATION</td>
<td>ONSET</td>
<td>DURATION</td>
<td>USES</td>
<td>PRECAUTION/SIDE EFFECTS</td>
<td>COMMENTS</td>
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<tr>
<td>Midazolam</td>
<td>1-2 mg IV not to exceed 4 mg as an initial dose in healthy adults younger than 60 years old.</td>
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<td>IMPORTANT NOTE: MIDAZOLAM has been associated with respiratory depression and respiratory arrest when used for conscious sedation. The drug should only be used in settings which provide for continuous monitoring of respiratory and cardiac function. Availability of resuscitative drugs, equipment and personnel should be assured. DO NOT ADMINISTER AS A BOLUS DOSE. CONTRAINDICATIONS A. Hypersensitivity to MIDAZOLAM or other benzodiazepines B. Patients with narrow angle glaucoma PRECAUTIONS A. Pulmonary disease (may produce prolonged respiratory depression) B. Hepatic or renal dysfunction (dose adjustments) C. Patients with open angle glaucoma may receive MIDAZOLAM only if they are receiving appropriate glaucoma therapy. D. Patients in shock or coma E. Acute alcohol intoxication with depression of vital signs F. Severe fluid or electrolyte imbalances G. Congestive heart failure (slower elimination) H. Avoid intra-arterial injection I. Avoid extravasation</td>
<td></td>
</tr>
<tr>
<td>Pediatric</td>
<td>0.05-0.1 mg/kg IV Maximum dose: 0.4 mg/kg or 10 mg</td>
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<td>REVERSAL ANTAGONIST: Flumazenil (Romazicon) 0.2 mg over 30 seconds-wait 30 seconds-if not effective give 0.3 mg over 30 seconds-still not effective 0.5 mg q 1 minute up to 3 mg cumulative dose</td>
<td></td>
</tr>
<tr>
<td>Morphine</td>
<td>IM 5-10 mg IV 5-10 mg</td>
<td>Up to 7 hours</td>
<td></td>
<td></td>
<td>MORPHINE should be used with CAUTION in the following conditions: (1) head injury, other intracranial lesions, or pre-existing increase in intracranial pressure; (2) patients having an acute asthma attack; (3) the presence of COPD, cor pulmonale, decreased respiratory depression, hypoxia or hypercapnia; (4) patients whose ability to maintain blood pressure is already compromised; (5) patients with atrial flutter and other supraventricular tachycardias; (6) patients with convulsive disorders, severe hepatic or renal impairment, hypothyroidism, Addison’s disease, prostatic hypertrophy or urethral stricture; (7) elderly or debilitated patients, and (8) in patients with acute abdominal pain when administration of drug might obscure the diagnosis or clinical course. The depressant effects of MORPHINE may be enhanced by the concomitant use of other CNS depressants.</td>
<td></td>
</tr>
<tr>
<td>Pediatric</td>
<td>0.05-0.1 mg/kg IV</td>
<td></td>
<td></td>
<td></td>
<td>REVERSAL ANTAGONIST: Naloxone (Narcan) 0.1-0.2 mg IV at 2 to 3 minute intervals until desired response obtained.</td>
<td></td>
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</tbody>
</table>
Appendix II

Recommendations for food/fluid intake prior to sedation

1. At 8 p.m. in the evening before the test or procedure STOP ALL FOOD including:
   Solid food, candy and chewing gum
   Milk, milk products, and formulas
   Orange juice and juice containing pulp

2. Breast feeding may continue until 3 hours before the time you are to arrive at the hospital.

3. Clear Fluids may be continued until 2 hours before the time you are to arrive at the hospital.

4. Clear fluids include:
   Water
   Apple Juice
   Clear Juice Drinks
   Plain Jell-o
   Clear Broth
   Pedialyte
   Ice Popsicles
Appendix III

Pediatric Sedation Discharge Instructions

Your child has been given a sedative or pain medication. Medications of this type can cause your child to be sleepy, less mentally alert, or more likely to stumble or fall. Therefore your child should be watched closely for the next eight hours. In addition, please observe the following precautions:

1. No eating or drinking for the next two hours. If your child is an infant he or she may be fed one half of a normal feeding one hour after discharge from MMSC. Observe for nausea and vomiting for 24 hours.
2. Encourage additional liquids after two hours for the next 24-48 hours.
3. Supervise all play activities for the next eight hours, especially if your child plays outside.
4. Do not allow play activities requiring normal childhood coordination, such as bike riding, skating, or use of swing sets or monkey bars for 24 hours.
5. Supervise baths, showers, cooking, or use of electrical devices such as curling irons for the next eight hours.

If you notice anything unusual about your child or have any questions, please call your physician or the Emergency Department at Marshalltown Medical & Surgical Center at 754-5040 immediately.

Please keep this
Parent Instruction Sheet for Pediatric Patients Receiving Sedation

Your child is scheduled for (test) ____________ on date ____________ at (time) _____________.
Your doctor has decided that in order for your child to be comfortable during the exam and to obtain the best test results, he/she will receive sedation. To assist you in the care of your child, please follow these instructions:

1. At 8 p.m. in the evening prior to the exam, stop all food including: solid food, candy, chewing gum, milk, milk products, formulas, orange juice or any juice containing pulp.

2. Breast feeding may continue until 3 hours before you arrive at the hospital.

3. Clear liquids may be continued until 2 hours before you are to arrive at the hospital. Clear liquids include: water, clear juice drinks, clear broth, plain jello, pedialyte, or ice popsicles.

4. Please bring your child’s pacifier.

5. A sleepy child will assist us. Please wake your child before the time of their usual awakening and do not allow a nap the day of the test.

6. Check in at the Registration desk upon arrival to the hospital 2 hours before the test is scheduled.

7. You will be directed to the Ambulatory Surgical Unit where a nurse will take a brief health history and check your child’s temperature, pulse and blood pressure.

8. The nurse will give the sedation prescribed by the doctor. A quiet environment will be provided. You can assist us with this be leaving other children at home, if possible.

9. At the appropriate time you and your child will be accompanied to the testing department.

10. During the exam, staff will be monitoring your child’s progress.

11. Following the exam you and your child will again be accompanied to the Ambulatory Surgical Unit where your child will be observed for a time.
12. **The discharge instructions** are as follows:

Your child has been given a sedative or pain medication. Medications of this type can cause your child to be sleepy, less mentally alert, or more likely to stumble or fall. Therefore, your child should be watched closely for the next eight hours. In addition, please observe the following precautions:

1. No eating or drinking for the next two hours. If your child is an infant he or she may be fed one half of a normal feeding one hour after discharge from MMSC. Observe for nausea and vomiting for 24 hours.
2. Encourage additional liquids **after two hours** for the next 24-48 hours.
3. Supervise all play activities for the next eight hours, especially if your child plays outside.
4. Do not allow play activities requiring normal childhood coordination, such as bike riding, skating, or use of swing sets or monkey bars for 24 hours.
5. Supervise baths, showers, cooking, or use of electrical devices such as curling irons for the next eight hours.

If you notice anything unusual about your child or have any questions, please call your physician or the Emergency Department at Marshall Medical & Surgical Center at 754-5040 immediately.
MARSHALLTOWN MEDICAL & SURGICAL CENTER
MARSHALLTOWN IA 50158

CONSCIOUS (MODERATE) SEDATION
ADULT/PEDIATRIC

MR-135 Revised 2/03

DATE: 

Health History (check if present)

- Asthma/Resp problems
- Kidney problems
- Diabetes
- Recent Resp infection
- Cardiopulmonary problems
- Liver Failure
- Increased Intracranial pressure
- Exposure to Contagious Disease
- Other

PEDIATRIC ONLY

Height: 

Weight: 

Current Medications:

Procedure:

- Patient/Family Education
- Reversal Agents Present
- NPO since
- Monitor Alarms Set and ON
- Emergency Equipment Immediately Accessible
- Oxygen Available
- ROM Neck Verified

MAXIMUM INITIAL DRUG DOSAGES

<table>
<thead>
<tr>
<th>Drug</th>
<th>Initial Dose</th>
<th>Maximum Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demerol</td>
<td>25-50 mg IV</td>
<td>Remifentanil</td>
</tr>
<tr>
<td>Morphine</td>
<td>5-10 mg IV</td>
<td>10 mg</td>
</tr>
<tr>
<td>Naxyn</td>
<td>0.5 mg</td>
<td>1 mg</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>50 mcg</td>
<td>100 mcg</td>
</tr>
</tbody>
</table>

IMMEDIATE PRE-PROCEDURE BASELINE ASSESSMENT - Time: 

<table>
<thead>
<tr>
<th>ADL SCALE</th>
<th>Time</th>
<th>Pre</th>
<th>Post</th>
<th>30 min</th>
<th>Dec</th>
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<tbody>
<tr>
<td>Activity</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Able to move 4 extremities voluntarily</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Able to move 2 extremities voluntarily</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Unable to move extremities voluntarily</td>
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<td></td>
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<tr>
<td>Respiration</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Normal respiratory effort</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Apnea or labored breathing</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Death</td>
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<tr>
<td>Circulation</td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>BP = 20% of pre-sedation level</td>
<td></td>
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<tr>
<td>2</td>
<td>BP = 21 - 39% of pre-sedation level</td>
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<tr>
<td>3</td>
<td>BP = 40 - 59% of pre-sedation level</td>
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<tr>
<td>4</td>
<td>BP = 60% of pre-sedation level</td>
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<tr>
<td>Consciousness</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Fully Awake</td>
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</tr>
<tr>
<td>2</td>
<td>Not Responding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Divertible</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>4</td>
<td>Needs O2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>O2 status &lt; 93%</td>
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<td></td>
</tr>
<tr>
<td>O2 Saturation</td>
<td>(SpO2)</td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>O2 status &lt; 93%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>O2 status = 93% to 97%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>O2 status &gt; 97%</td>
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</tbody>
</table>

Level of consciousness Key:

- If O2 sat drops below 93%,
- and O2 at 2 liter NC
- and CO2 patient, MD consulted
- for O2 order

<table>
<thead>
<tr>
<th>Time</th>
<th>B/P</th>
<th>R</th>
<th>Loc</th>
<th>Narrative</th>
<th>Initials</th>
</tr>
</thead>
</table>

Patient must score 6 or more for 20 - 30 minutes prior to discharge.