TOPIC: Sedation Guideline

Question: Just like everyone across the United States we are in the process of developing sedation guidelines for our ICU patients. Could you please provide us with any protocols or articles that we could use in our task?

A: According to the Standards and Intents for Sedation and Anesthesia Care in the Revisions to Anesthesia Care Standards Comprehensive Accreditation Manual for Hospitals, January 1, 2001 (http://www.jcaho.org/search_frm.html) the following definitions should be used when referring to sedation.

“The standards for sedation and anesthesia care apply when patients receive, in any setting, for any purpose, by any route, moderate or deep sedation as well as general, spinal, or other major regional anesthesia. Definitions of four levels of sedation and anesthesia include the following:

- **Minimal sedation (anxiolysis)**
  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 (“conscious 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 are required to maintain a patent 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 maybe impaired. Patients may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

- **Anesthesia**
  Consists of general anesthesia and spinal or major regional anesthesia. It does not include local 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.”
AACN POSITION STATEMENT

The joint position statement on Conscious Sedation authored by AWHONN and approved by the AACN Executive Board, November 1991 and reaffirmed 1994, 1996 follows:

Role of the Registered Nurse (RN) in the Management of Patients Receiving Conscious Sedation for Short-Term Therapeutic, Diagnostic, or Surgical Procedures

A. Definition of IV Conscious Sedation

Intravenous conscious sedation is produced by the administration of pharmacologic agents. A patient under conscious sedation has a depressed level of consciousness, but retains the ability to independently and continuously maintain a patent airway and respond appropriately to physical stimulation and/or verbal command.

B. Management and Monitoring

It is within the scope of practice of a registered nurse to manage the care of patients receiving IV conscious sedation during therapeutic, diagnostic, or surgical procedures provided the following criteria are met:

1. Administration of IV conscious sedation medications by non-anesthetist RNs is allowed by state law and institutional policy, procedure, and protocol.

2. A qualified anesthesia provider or attending physician selects and orders the medications to achieve IV conscious sedation.

3. Guidelines for patient monitoring, drug administration, and protocols for dealing with potential complications or emergency situations are available and have been developed in accordance with accepted standards of anesthesia practice.

4. The registered nurse managing the care of the patient receiving IV conscious sedation shall have no other responsibilities that would leave the patient unattended or compromise continuous monitoring.

5. The registered nurse managing the care of patients receiving IV conscious sedation is able to:
   a. Demonstrate the acquired knowledge of anatomy, physiology, pharmacology, cardiac arrhythmia recognition and complications related to IV conscious sedation and medications.
   b. Assess total patient care requirements during IV conscious sedation and recovery. Physiologic measurements should include, but not be limited to, respiratory rate, oxygen saturation, blood pressure, cardiac rate and rhythm, and patient's level of consciousness
   c. Understand the principles of oxygen delivery, respiratory physiology, transport and uptake, and demonstrate the ability to use oxygen delivery devices
   d. Anticipate and recognize potential complications of IV conscious sedation in relation to the type of medication being administered
e. Possess the requisite knowledge and skills to assess, diagnose and intervene in the event of complications or undesired outcomes and to institute nursing interventions in compliance with orders (including standing orders) or institutional protocols or guidelines

f. Demonstrate skill in airway management resuscitation

g. Demonstrate knowledge of the legal ramifications of administering IV conscious sedation and/or monitoring patients receiving IV conscious sedation, including the RN's responsibility and liability in the event of an untoward reaction or life-threatening complication

6. The institution or practice setting has in place an educational/competency validation mechanism that includes a process for evaluating and documenting the individuals' demonstration of the knowledge, skills, and abilities related to the management of patients receiving IV conscious sedation.

7. Evaluation and documentation of competence occurs on a periodic basis according to institutional policy.

C. Additional Guidelines

1. Intravenous access must be continuously maintained in the patient receiving IV conscious sedation.

2. All patients receiving IV conscious sedation will be continuously monitored throughout the procedure as well as the recovery phase by, physiologic measurements including, but not limited to, respiratory rate, oxygen saturation, blood pressure, cardiac rate and rhythm, and patients' level of consciousness.

3. Supplemental oxygen will be immediately available to all patients receiving IV conscious sedation and administered per order (including standing orders).

4. An emergency cart with a defibrillator must be immediately accessible to every location where IV conscious sedation is administered. Suction and a positive pressure breathing device, oxygen, and appropriate airways must be in each room where IV conscious sedation is administered.

5. Provisions must be in place for back-up personnel who are experts in airway management, emergency intubation, and advanced cardiopulmonary resuscitation if complications arise.

Joint Position Statement Author-AWHONN
Approved by the Executive Board, November 1991.
Endorsed by:
American Association of Critical-Care Nurses
American Association of Neuroscience Nurses
American Association of Nurses Anesthetists
American Association of Spinal Cord Injury Nurses
American Association of Occupational Health Nurses
American Nephrology Nurses Association
American Nurses Association
American Radiological Nurses Association
American Society of Pain Management Nurses

American Society of Plastic and Reconstructive Surgical Nurses
American Society of Post Anesthesia Nurses
American Urological Association, Allied
Association of Operating Room Nurses
Association of Pediatric Oncology Nurses
Association of Rehabilitation Nurses
Dermatology Nurses Association
National Association of Orthopedic Nurses
National Flight Nurses Association
Nurses Consultants Association, Inc.
Nurses Organization of Veterans Affairs
Nursing Pain Association

AACN Protocol for Practice

Sedation and Neuromuscular Blockade in Patients with Acute Respiratory Failure can be purchased online at our Bookstore at www.aacn.org or by phone at 1-800-899-AACN. It is item # 170725. It is $11
for members and $14 for non-members. It incorporates detailed nursing practice implication and an excellent annotated bibliography.

AACN Articles

MONITORING CONSCIOUS SEDATION
CCN APRIL 1997 - VOLUME 17 - NUMBER 2

Q: What is the nurse's role in monitoring a patient who is consciously sedated? How can the Joint Commission of Hospital Accreditation requirements be met on a consistent basis throughout the facility, whether it be an outpatient bronchial unit, a GI lab, or in the recovery room?

A: Judy Davidson, RN, MS, CCRN, replies:

The role of the nurse in conscious sedation is to monitor the effects of sedatives given for tests and procedures. During this time the nurse should be relieved of other duties. Assessment includes monitoring adequate airway and gas exchange, cardiovascular response, level of consciousness, and whether pain and anxiety are controlled to patient satisfaction. Literature included on the additional reading list at the end of this section offers recommendations for what to monitor, defines conscious sedation, and provides guidance for stratifying risk factors of patients. Issues that remain unclear include what special considerations should be made for monitoring sicker patients (American Society of Anesthesia [ASA] Class III and IV), and when a physician should be available following the test/procedure.

Because you cannot predict the response to any given dose or type of sedative, details on how to respond to the transition between conscious and deep sedation of the intubated and nonintubated patient should be developed. The reason why the Joint Commission of Hospital Accreditation focuses on conscious sedation is because once sedated, a patient is vulnerable. We need to construct an environment that protects this patient from harm. To do so, I suggest the following steps:

- Read the additional reading listed at the end of this section.
- Adopt all recommendations for all age groups.
- Agree that advanced cardiac life support or equivalent knowledge is necessary to monitor conscious sedation.
- Focus on the details of how to monitor ASA Class III and IV patients.
- List the tests/procedures in the organization that may be performed with conscious sedation.
- Develop a facilities checklist.
- Inspect each location where conscious sedation is performed.
- Correct any deficiencies.
- Standardize emergency equipment and personnel to accompany transport of sedated patients.
- Set frequency parameters for monitoring: every 5 minutes for deep sedation, every 15 minutes for conscious patients, discontinue when back to baseline for 30 minutes.
- Review historical cases where negative outcomes were attributed to sedation.
- Check availability of reversal agents.
- Evaluate flumazenil and naloxone hydrochloride (Narcan) usage.
- Develop an interdisciplinary conscious sedation guideline for your institution.
- Design competency testing for all those who order or monitor sedation.
- Make sure all nurses who administer or monitor conscious sedation can answer the following questions:

  1. What tests/procedures are performed in your workplace that may require conscious sedation?
  2. How do you monitor these patients differently from other patients in your workplace?
3. Which drugs are most commonly used for this purpose?
4. What adverse events do you watch for when using those drugs?
5. What safeguards do you have in place to protect these vulnerable patients during transport to and from their hospital bed?
6. How do you document your monitoring efforts?
7. How do you know that the sedation for a given test or procedure is adequate?
8. If you are in charge and making assignments, how do you know that the nurse who will be monitoring conscious sedation is competent to perform this function?

- Develop a reference table of sedative dosing guidelines.
- Keep sedative dosing guidelines. Keep the table handy wherever conscious sedation is performed. Distribute to staff.

This entire process may require a change in the way business has always been performed. To provide monitoring by staff adequately trained in these skills, additional training may be required of existing staff, or trained staff may be asked to move to new areas. Should the MRI be staffed with a recovery room nurse or an ICU nurse? What about radiology? The concept of a "sedation clinic" has been reported, in which length of time spent in procedures and sedation failures were decreased. This type of flexible thinking is what is necessary to provide a safe environment for all patients who are sedated for tests and procedures.

**Additional Reading**


Here are some other sedation-related articles from AACN journals. They can be viewed on our website (www.aacn.org)

**CRITICAL CARE MANAGEMENT OF SEDATION**

Sedating Critically Ill Patients: Factors Affecting Nurses' Delivery of Sedative Therapy
Craig R. Weinert, Linda Chlan, and Cynthia Gross
AJCC MAY 2001 - VOLUME 10 - NUMBER 3
Sedation and Pain Management in Critically Ill Adults
Richard Arbour, RN, BSN, CCRN, CNRN
CCN OCTOBER 2000 - VOLUME 20 - NUMBER 5

A Post Hoc Descriptive Study of Patients Receiving Propofol
Susan D. Kowalski, RN, PhD, and Carol A. Rayfield, RN, MSN
AJCC JANUARY 1999 - VOLUME 8 - NUMBER 1

Use of Propofol for Sedation in the ICU
Holly Covington
CCN AUGUST 1998 - VOLUME 18 - NUMBER 4

CRITICAL CARE TECHNIQUES AND PHARMACOLOGY:
Propofol for the Long-Term Sedation of a Critically Ill Patient
Lisa J Miller, PharmD, and Robna Wiles-Pfeiffer, PharmD
AJCC JANUARY 1998 - VOLUME 7 - NUMBER 1