



# Boulder Community Health Medical Staff Department

## SEDATION TEST for NON-ANESTHESIOLOGISTS

Name: \_\_\_\_\_ Specialty/Dept: \_\_\_\_\_  
Please Print

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*By your signature, you attest that you personally completed this test without outside assistance other than your personal review of the reference materials.*

Additional information pertaining to sedation/analgesia, (i.e., specialty society guidelines: ASA, ACEP, ASGE, and others) is available on-line or on the Medical Staff page of the Scoop.

**Directions: Most questions have more than one correct answer. Circle the letters corresponding to each correct answer.**

1. The Interpretive Guidelines (January 2011) from CMS (Medicare) require that:
  - A. All Anesthesia Services at the hospital are to be under the supervision of a Director of Anesthesia Services
  - B. Anesthesia Services are defined to include all levels of anesthesia (locals, sedatives, general anesthetics, etc) given at BCH (with a few exceptions such as ventilated patients in the ICU).
  - C. All departments and clinics of the hospital must be included under the Anesthesia Services policies
  - D. All Anesthesia Services policies are applied in the same way no matter to which department or clinic they are applied
  
2. Prior to performing a procedure with moderate sedation, the practitioner must perform or provide which of the following?
  - A. History and Physical Exam (or update)
  - B. Consent for the Sedation (written form may be filled in by assistant)
  - C. Consent for the Procedure (written form may be filled in by assistant)
  - D. Evaluation of last oral intake.
  
3. Significant sedation-related risk factors include:
  - A. Obstructive Sleep Apnea
  - B. Morbid Obesity
  - C. Airway abnormalities (short chin, thick neck, limited jaw/head/neck motion, etc)
  - D. Uncooperative patients

4. The ASA Pre-procedure Fasting Guidelines recommend a minimum fasting period of six hours for everything but clear liquids for healthy adults having elective procedures. Factors which may delay gastric emptying beyond this six hour period include which of the following?
- A. Trauma or injury since the last oral intake
  - B. Diabetes mellitus
  - C. Pregnancy
  - D. Recent ingestion or injection of narcotic pain medications
  - E. Hypertension
5. In urgent, emergent, or situations in which gastric emptying may be impaired; consideration of which of the following are recommended to help prevent aspiration of gastric contents while under sedation?
- A. Delaying the procedure if possible
  - B. Decreasing the level of sedation to decrease the chances of impairing the patient's airway reflexes
  - C. Having the patient drink a large glass of milk to stimulate gastric emptying
  - D. Consulting Anesthesiology for general anesthesia with tracheal intubation, instead of giving sedation with an unprotected airway
  - E. Inducing vomiting with syrup of ipecac to empty the stomach as well as possible
6. The proper equipment must be present for safe administration of sedation. What equipment is required to be present for administration of sedation?
- A. Oxygen source
  - B. Warm blankets to prevent hypothermia
  - C. Central monitoring at the nursing station, as found in the ICU
  - D. Airway management equipment (such as oral airways and a resuscitation bag)
  - E. Working suction equipment
7. Individual patients always react uniformly to standard doses of sedatives.
- A. True
  - B. False
8. Which of these factors must be considered when determining appropriate doses of sedative medications?
- A. Patient age
  - B. Existing medical conditions
  - C. Duration of sedation desired
  - D. Interactions with medications already given
  - E. Dosage dependent side effects of some sedatives
9. The properly credentialed provider ordering moderate sedation shall be responsible for the management of the patient during the procedure, with the assistance of a registered nurse or other qualified sedation professional.
- A. True
  - B. False

10. According to the CMS Anesthesia Services Interpretive Guidelines, the level of sedation is determined by evaluation of which of the following?
- A. Responsiveness of the patient to verbal and tactile stimulation
  - B. The patient's need for assistance to maintain a patent airway
  - C. Checking arterial blood gases
  - D. The patient's ability to maintain spontaneous ventilation and adequate cardiovascular function
  - E. Evaluation of blood levels of sedative medications
11. Appropriate personnel are required for the safe administration of sedation, especially at deeper levels. Which of the following are TRUE?
- A. Moderate sedation for a procedure may be administered and monitored by the same individual who is performing the primary procedure and does not require any additional personnel.
  - B. A separate individual must be present to monitor the patient during moderate sedation, but that individual may assist with the procedure in minor ways if the patient is stable.
  - C. BCH policy requires a person with current advanced life support skills must be present in the treatment room during moderate or deep sedation.
  - D. None of the above
12. Practitioners administering moderate sedation must be able to rescue a patient from unintentional deep sedation. This may entail:
- A. Maintaining a patent airway
  - B. Assisting inadequate ventilatory efforts
  - C. Administration of medications to reverse the effect of narcotics
  - D. Suspending the procedure until the patient returns to the planned level of sedation
  - E. Administration of caffeine containing beverages to lessen the sedative effects
13. Expected sedative effects always precede untoward side effects such as respiratory depression when administering sedatives.
- A. True
  - B. False
14. If very little response is noted within 30 seconds from a sedative medication given into an IV, one should:
- A. Administer twice the amount of the initial dose immediately
  - B. Wait a little longer, as 30 seconds is not usually enough time for a medication to have a full effect
  - C. Check the IV site to be sure it's not infiltrated or disconnected
  - D. Stop the procedure and get a toxicology screen to see if the patient has been using illicit drugs
  - E. Switch to a different medication and give a full dose immediately since the first one didn't work
15. Medications which may cause moderate sedation, deep sedation, or General Anesthesia depending on the dose include: (NOTE: This question has **ONLY ONE** correct answer)
- A. Fentanyl
  - B. Etomidate
  - C. Propofol
  - D. Midazolam
  - E. All of the above

16. Medications with NO available pharmacological reversal agent include:
- A. Fentanyl
  - B. Ketamine
  - C. Etomidate
  - D. Midazolam
  - E. Propofol
17. Naloxone is the medication used to reverse the effects of Midazolam.
- A. True
  - B. False
18. Which of the following should be considered when administering naloxone (Narcan)?
- A. The dose may need to be repeated after 30-45 minutes because the duration of action of naloxone may be shorter than the duration of action of the narcotic being reversed
  - B. Acute narcotic reversal with naloxone may cause pain, nausea, vomiting, and hypertension
  - C. When used during a sedation procedure, naloxone should be initially titrated in small doses every one to two minutes or so until the patient regains a more appropriate level of sedation
  - D. An appropriate initial dose of naloxone to reverse slightly excessive sedation during a sedation procedure would be 4 (four) mg IV push
19. During a sedation procedure, oxygen saturation should be checked every 15 minutes and recorded.
- A. True
  - B. False
20. Parameters to be continually monitored and recorded at least every 5 minutes during sedation include which of the following?
- A. Respiratory rate and heart rate
  - B. Blood pressure, except possibly in pediatric patients
  - C. Temperature
  - D. Pulse oximetry
21. During sedation of a patient for whom moderate sedation has been planned; firm, painful stimulation is required to evoke a response of reflex withdrawal from the painful stimulation. Which of the following actions should be taken?
- A. Give additional analgesics. The patient shouldn't move even with painful stimulation when under moderate sedation.
  - B. Give additional sedative medication if the procedure itself isn't expected to be painful.
  - C. Evaluate the patient's respiratory and cardiac function immediately and consider giving reversal agents if impaired. The patient has slipped into a level of deep sedation or general anesthesia.
  - D. Wait to give more sedation until the patient can respond purposefully to firm, painful stimulation (but not to verbal or light tactile stimulation). This indicates a level of moderate sedation.

22. Measures to rescue a patient from deeper than intended levels of sedation may include:
- Stop giving sedating medications
  - Stimulate the patient to breath if respiratory impairment is present
  - Switch to a different sedative medication and give an additional dose
  - Assist respirations with a bag-valve-mask if needed for respiratory insufficiency
  - Administer a reversal agent if there is one for the sedative being used
23. The effects of the sedation may last longer than the duration of the procedure. It is the responsibility of the practitioner supervising the sedation to ensure that the patient is protected until they recover their ability to protect themselves. This may be accomplished by which of the following?
- Transfer the patient to PACU or ICU for appropriate monitoring and care until the sedation wears off after the procedure (this is not necessarily required but may be done to ensure that the patient has adequate care).
  - Ensure that a person with Advanced Life Support skills remains physically present at the bedside until the patient recovers at least to a level of moderate sedation and that the patient will remain under the care of a Registered Nurse skilled in the recovery of sedated patients, who will be present in the treatment area until the patient meets discharge criteria
  - Send the patient home in a taxi right after the procedure if he promises to call if he has problems.
  - Instruct the patient's spouse to wake him up if he stops breathing after discharge
24. QA/peer review information collected regarding moderate sedation practices may include:
- Episodes of deeper than planned levels of sedation
  - Episodes requiring airway management maneuvers or respiratory assistance under planned moderate sedation
  - Episodes of being cautious or of not performing enough sedation procedures per hour in an average day.
  - Any major complications possibly related to the use of sedation.
25. A moderate sedation practitioner with excessive QA/peer review reports regarding unintentional deep sedation may be required to:
- Undergo review by their respective Specialty Section and the Anesthesia Services Director
  - Apply and qualify for deep sedation privileges if deep sedation is used in their practice
  - Consult practitioners with deep sedation privileges to provide deep sedation as needed for their patients
  - Surrender or lose their moderate sedation privileges at BCH
  - Accept a commendation for providing care they are not credentialed to provide
26. **Are you seeking privileges to administer sedating medications which do not have reversal agents?**
- No I will not be administering sedating medications which do not have reversal agents and I am not seeking privileges to use them at this time.
- Yes\* I am seeking privileges to use the following sedating medications which do not have reversal agents.

**(Continued next page)**

\*If you answered yes to #26, attach a brief summary of the protocol(s) to be used for the level(s) of sedation for which you are seeking privileges including: (Boulder Emergency Physicians protocol is on file in the Medical Staff Department)

- average initial and supplemental doses,
- usual dosing interval or infusion rate,
- dose adjustment for elderly/frail patients,
- dose adjustment for concurrent medications/ sedatives,
- two common side effects of each medication,
- one relative or absolute contraindication for each medication (other than allergy to the medication),
- pediatric dosing if you will be sedating pediatric patients

This document will be used to determine whether to grant privileges for use of these specific medications and under what conditions (protocol) you may administer them.

**DEEP SEDATION:**

**BECAUSE OF THE POTENTIAL FOR THE UNINTENTIONAL PROGRESSION TO GENERAL ANESTHESIA IN CERTAIN PROCEDURES, THE PHYSICIAN QUALIFIED TO ADMINISTER DEEP SEDATION/ANALGESIA CANNOT BE THE SAME PHYSICIAN PERFORMING THE PROCEDURE. (Emergency Medicine / Critical Care Exception):**

1. A major safety requirement for giving sedation is that the practitioner must be able to manage a patient who becomes one level more deeply sedated than originally planned. For planned deep sedation, the practitioner must be able to manage unplanned general anesthesia. Practitioners administering deep sedation must be qualified to perform which of these actions?
  - A. Endotracheal intubation
  - B. Pulmonary artery catheterization
  - C. Chin lift/jaw thrust airway management
  - D. Advanced Life Support
  - E. Reversal of narcotic and benzodiazepine medications
2. From among these choices, what would be the best size of endotracheal tube for use in an average adult female?
  - A. 5.0 mm
  - B. 7.5mm
  - C. 10.5 mm
  - D. 12 mm
3. What is a reasonable IV dose of succinylcholine to use for emergency intubation of a 70 kg adult?
  - A. 20-25 mg
  - B. 100-140 mg
  - C. 350-400 mg
  - D. 630-700 mg
4. Practitioners allowed to administer deep sedation include properly credentialed:
  - A. Specially trained Staff RNs
  - B. Specially trained PAs
  - C. Advanced Practice Nurses (other than CRNA's)

- D. MDs and DOs
5. Deep sedation requires that the practitioner perform a pre-sedation assessment which contains all of the elements found in a complete Pre-Anesthesia Assessment. These elements would include:
- A. History and Physical Exam done within 48 hours before the start of the sedation
  - B. Airway assessment
  - C. NPO status
  - D. Sedation Plan
  - E. Determining the patient's favorite automobile or bicycle
6. Practitioners (other than ED or CCPs) providing deep sedation for a procedure may assist with or perform the primary procedure if the patient is stable.
- A. True
  - B. False
7. A capnograph monitoring a patient's exhaled CO2 via a nasal cannula will fairly reliably show:
- A. The patient's respiratory rate
  - B. The patient's accurate End Tidal CO2 level
  - C. A complete respiratory arrest or complete obstruction of the airway
  - D. Occasional false alarms due to obstruction of the sampling tube
8. Audible alarms on monitors must be:
- A. Silenced during the procedure to avoid distractions
  - B. Set appropriately and on at all times during sedation
9. Supplemental oxygen administered to a patient undergoing deep sedation:
- A. Has no risks and should be used in copious quantities for all patients having sedation.
  - B. Should be used as needed to maintain adequate oxygen saturation levels
  - C. May obscure inadequate respirations by the patient if only pulse oximetry is used to monitor the patient's respiratory status
  - D. Should be used with continuous capnography during deep sedation

Submit completed test, with any associated documentation, to the

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