

NAME: _____

SCORE: _____

**PHYSICIAN COMPETENCY FOR ADULT DEEP SEDATION
(Ages 14 and older)**

1. Pre-procedure evaluation for moderate sedation should involve all of the following EXCEPT:
 - a) Airway Exam
 - b) Anesthetic history
 - c) Auscultation of heart and lungs
 - d) Eliciting a history of alopecia

2. All of the following are true regarding the Mallampati airway classification EXCEPT:
 - a) It should be assessed with the patient opening the mouth and extending the tongue
 - b) It should be assessed with the patient in the sitting position
 - c) It is a useful tool used to assess the amount of sedation a patient will need
 - d) It is one tool used to assess difficulty of tracheal intubation

3. On pre-procedure evaluation, it is noted that a patient can only open his mouth 1 cm because of TMJ disease. Which of the following is MOST likely?
 - a) The patient will require a greater-than-expected dose of sedative medications
 - b) The patient is likely to become hypoxemic during minimal sedation
 - c) The patient is more likely to have obstructive sleep apnea
 - d) It may be difficult to rescue the patient if he stops breathing during the procedure

4. Findings of pre-procedure evaluation should be reconfirmed at which one of the following times?
 - a) Only after a complication occurs
 - b) Within 6 weeks of the procedure
 - c) Within a week of the procedure
 - d) Immediately before the procedure

5. A 67 y/o female is administered fentanyl and midazolam for colonoscopy. She becomes sedated to the point where her airway is partially obstructed, but responds purposefully to painful stimulation. This corresponds to which of the following levels of sedation?
 - a) Minimal sedation
 - b) Moderate sedation
 - c) Deep sedation
 - d) General anesthesia

6. Naloxone:
 - a) Can be useful for midazolam reversal if given in large amounts
 - b) Can result in pulmonary HTN and tachycardia
 - c) Should always be given as a 0.4 mg bolus for patient safety
 - d) Should be given after all procedures in which an opioid was administered

7. During moderate sedation, an individual with advanced life support skills must be available
 - a) By calling the hospital operator
 - b) Within 8-9 minutes
 - c) Within the procedure room
 - d) Within 2.5 miles of the facility

8. The duration of monitoring of a patient post-procedure should be governed by all of the following EXCEPT:
 - a) Level of sedation used
 - b) The patient's overall condition
 - c) Timing of the next procedure
 - d) The nature of the procedure for which sedation was administered

9. Adverse effects of opioids include:
 - a) Nausea and vomiting
 - b) Respiratory depression
 - c) Bradycardia
 - d) All of the above

10. Discharge criteria should include all of the following EXCEPT:
 - a) Stable vital signs
 - b) The availability of a responsible adult
 - c) The ability to count by 3's to 36
 - d) An alert, oriented patient

11. In deep sedation:
 - a) The patient should respond to light tactile stimulation
 - b) Hypotension is common
 - c) Bradycardia is common
 - d) Airway intervention may be required

12. Fentanyl:

- a) Should never be given to a patient older than 65
- b) Can be reversed with small doses of flumazenil
- c) Is a potent benzodiazepine
- d) Can potentiate the effects of midazolam

13. Midazolam:

- a) Can be reversed with large doses of naloxone
- b) Should always be used with fentanyl
- c) Has no reversal agent
- d) Is an amnestic agent

14. An 81 y/o female is undergoing a procedure using fentanyl and midazolam for sedation. She develops stridor but is breathing spontaneously. What would be the most appropriate NEXT step?

- a) Overhead page "any" anesthesiologist for help
- b) Give additional sedative to relax the patient
- c) Insert an oral or nasal airway
- d) Call the patient's family to discuss DNR status

15. You are seeing a patient scheduled for moderate sedation for a 20-30 minute procedure. He states that he "stopped breathing" during a previous colonoscopy and needed a "breathing tube". You are unable to obtain records secondary to computer difficulties. You should:

- a) Proceed since the patient won't need much sedation
- b) Proceed if the patient states he's undergone sedation since then without problems
- c) Proceed if the patient has a Mallampati Class 1 airway
- d) Obtain an anesthesiology consult prior to the procedure

16. Flumazenil:

- a) Should be administered to speed recovery to all patients receiving midazolam
- b) Should be administered intravenously in 1 mg increments
- c) Should be given by the intramuscular route
- d) Initial dose should be 0.2 mg IV

17. Which of the following statements is FALSE:
- a) Specific antagonists should be available whenever opioids or benzodiazepines are used
 - b) Sedation and analgesia comprise a continuum of states ranging from minimal sedation (anxiolysis) through general anesthesia
 - c) Physicians intending to produce a given level of sedation should be able to rescue patients whose level of sedation becomes deeper than initially intended
 - d) The primary causes of morbidity associated with moderate sedation are hypotension and bradycardia
18. A patient receiving midazolam and fentanyl for moderate sedation should be able to be rescued if they slip into an unintended level of:
- a) Minimal sedation
 - b) Moderate sedation
 - c) Deep sedation
 - d) General anesthesia
19. A patient who is breathing supplemental nasal oxygen develops complete airway obstruction during moderate sedation. Which of the following is likely to occur FIRST?
- a) Decrease in oxygen-saturation reading by pulse oximeter
 - b) Cessation of breath sounds
 - c) Sinus bradycardia on ECG
 - d) Hypotension on NIBP
20. An otherwise healthy 30 y/o male requires moderate sedation. He should not consume clear liquids for a minimum of how many hours before the start of the procedure?
- a) 1
 - b) 2
 - c) 4
 - d) 8
21. TRUE or FALSE
During moderate sedation, patients typically display a loss of protective reflexes.
22. TRUE or FALSE
Pulse oximetry is the best monitor available for detecting airway obstruction.
23. TRUE or FALSE
The use of supplemental oxygen during moderate sedation decreases the likelihood of airway obstruction

24. TRUE or FALSE

The initial treatment for partial airway obstruction during moderate sedation should include jaw/chin lift and/or placement of an oral airway

25. TRUE or FALSE

Preprocedure laboratory testing should be guided by the patient's underlying medical condition and the likelihood that the results will affect the management of sedation.

26. Physicians administering propofol or methohexital for deep sedation should have the skills and training to rescue patients if they slip into an unintended level of:

- a) Minimal Sedation
- b) Moderate Sedation
- c) Deep Sedation
- d) General Anesthesia

27. Flumazenil will antagonize the respiratory depression associated with which of the following medications?

- a) Meperidine
- b) Methohexital
- c) Midazolam
- d) Propofol

28. Which of the following statements concerning deep sedation is TRUE?

- a) Physicians who obtain deep sedation privileges can monitor the patient and perform the procedure at the same time if end tidal CO₂ monitoring is used
- b) Patients undergoing deep sedation who unintentionally slip into a state of general anesthesia should be transported to the operating room as soon as possible
- c) ECG monitoring is optional for a patient with recent CHF undergoing deep sedation
- d) Patients undergoing deep sedation should have a purposeful response to painful stimulation

29. Which of the following is FALSE regarding patients undergoing deep sedation?

- a) Airway intervention may be required
- b) Spontaneous ventilation may be inadequate
- c) Cardiovascular function is usually maintained
- d) A purposeful response to verbal stimulation is maintained

30. All of the following are true statements EXCEPT:
- Because sedation is a continuum, it is not always possible to predict how an individual patient will respond
 - Physicians administering moderate sedation should be able to rescue patients who enter a state of deep sedation
 - Patients undergoing deep sedation are often unarousable even with a painful stimulus
 - Patients undergoing moderate sedation should have a purposeful response to verbal or tactile stimulation
31. Propofol:
- Is reversible if administered with an opioid
 - Is contraindicated in patients under 10 y/o
 - Should be administered by physicians who are qualified to rescue patients whose level of sedation becomes deeper than initially intended and who enter, if briefly, a state of general anesthesia
 - Should be bolused in the same dose to all patients
32. Methohexital:
- Is reversible if administered with midazolam
 - Should be administered in the same dose to all patients
 - Should always be used with propofol to prevent bad dreams
 - Is a short-acting barbiturate
33. A 54 y/o male receives ketamine for sedation and analgesia. His eyes are open but his breathing is labored and he is completely unresponsive to both verbal and painful stimulation. This corresponds most closely to a state of:
- Anxiolysis
 - Moderate sedation
 - Deep sedation
 - General anesthesia
34. A 77 y/o female is receiving propofol for sedation. She stops breathing and becomes completely unresponsive to verbal or tactile stimulation. The pulse oximeter reads 82%. Which of the following is MOST likely to improve the patient's oxygenation?
- Positive pressure ventilation
 - Increasing the nasal cannula oxygen to 5 L/M
 - Intravenous flumazenil
 - Asking for the time-out to be repeated
35. Which of the following pose an increased risk in deep sedation:
- Morbid obesity
 - Obstructive sleep apnea
 - History of substance abuse
 - All of the above

36. TRUE or FALSE

Effects of opioids include nausea and bradycardia.

37. TRUE or FALSE

Patients undergoing moderate sedation typically display hypotension.

38. TRUE or FALSE

If sedated properly, patients undergoing deep sedation should not respond to painful stimuli.

39. TRUE or FALSE

During deep sedation, REFLEX withdrawal from a painful stimulus is considered a purposeful response.

40. TRUE or FALSE

Monitored Anesthesia Care (MAC) describes a specific anesthesia service in which an anesthesiologist has been requested to participate in the care of a patient undergoing a diagnostic or therapeutic procedure.