Moderate Sedation

Revised May 09
Moderate Sedation Forms

Goal: To orient providers on moderate sedation forms utilized by providers at Shands Jacksonville.
Proper Documentation for Moderate Sedation/Analgesia (MSA)

A health care provider other than the person performing the procedure should monitor the patient at all times. This is non-negotiable. That person should record in the medical record at minimum every five (5) minutes:

- Level of consciousness (0 = unconscious, 1 = sedate but responsive, 2 = alert)
- Peripheral oxygenation via pulse oximeter and respiratory rate
- Heart rate, Heart rhythm, Blood Pressure
- Pain score (0= none, 1= tolerable, 2= not tolerated)

This level of monitoring meets Joint Commission guidelines.
Pre-sedation Requirements

A pre-sedation assessment must be completed for any patient for whom moderate sedation is contemplated. Components of this assessment may be completed up to 24 hours in advance of the procedure and should, at a minimum, include:

- Patient interview verifying:
  - past and present medical history
  - current medications and allergies, including previous adverse reactions to medications
  - previous sedation/anesthesia experience
  - most recent food intake

- Physical examination, to include the patient's airway, cardiovascular and respiratory systems

- Physical status evaluation (consider ASA)

- Results of relevant diagnostic studies

- Plan for choice of sedation
Indications and Contraindications to MSA

INDICATIONS

Procedures appropriate for procedural sedation include ANYTHING requiring the sedation and/or analgesia to perform/facilitate the procedure: debridement of wounds, placement of central lines, chest tube placement, abscess drainage, reduction of fractures and dislocations and prolonged imaging such as angiography and pediatric diagnostic imaging.

Contraindications

- Food/liquid intake outside ASA preoperative fasting parameters:
  - 2 hours for clear fluids, 6 hours for light solids.
  - Exception to this guideline is emergent procedures.
- Physical class IV or greater
- Lack of support staff or monitoring equipment
- Lack of experience/credentialing on part of clinician
Pertinent Patient History
Pre-Sedation

- Patient interview verifying:
  - past and present medical history
  - current medications and allergies, including previous adverse reactions to medications
  - previous sedation/anesthesia experience
  - most recent food intake

- Physical examination, to include the patient's airway, cardiovascular and respiratory systems

- Physical status evaluation (consider ASA)

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- Plan for choice of sedation
ASA Classification

Patients should be triaged to the appropriate Physical Status Classification before conscious sedation is performed:

- Class I: Normally healthy
- Class II: Patient with mild systemic disease (e.g. hypertension)
- Class III: Patient with severe systemic disease (e.g. CHF), non-decompensated
- Class IV: Patient with severe systemic disease, decompensated
- Class V: Moribund patient, survival unlikely

Procedural sedation is appropriate for patients in Classes I, II and III. Patients in classes IV and higher are better suited for the OR.
Airway Evaluation

Modified Mallampati Classification System

I – Uvula, soft palate, tonsillar pillars
II – Soft palate, uvula
III – Base of uvula
IV – Hard palate only

• Mouth Opening
• Thyromental Distance
• Neck Extension
• Dentition
Carefully Evaluate Facial Features

Beard and problematic anatomy

Edentulous

A mask won’t fit over that!
Some Predictors of a Difficult Airway

- C-spine immobilized trauma patient
- Protruding tongue
- Short, thick neck
- Prominent upper incisors ("buckteeth")
- Receding mandible
- High, arched palate
- Beard or facial hair
- Dentures
- Limited jaw opening
- Limited cervical mobility
- Upper airway conditions
- Face, neck, or oral trauma
- Laryngeal trauma
- Airway edema or obstruction
- Morbidly obese
Useful Pneumonic to Predict a Difficult Airway

LEMON

- LOOK externally
- EVALUATE for 3-3-2 rule
- MALLAMPATI
- OBSTRUCTION
- NECK Mobility
DIFFICULT AIRWAY IDENTIFICATION:

Look Externally
Abnormal Facial Features
IDENTIFICATION OF THE DIFFICULT AIRWAY:

Evaluate 3-3-2
Jaw Opening Should Equal 3 Finger Breaths
Thyromental Distance Should Equal 3 Finger Breaths or 5-6 cms
Distance From Hyoid to Top of Thyroid Cartilage Should be 2 Finger Breadths
Beware of hidden restricted jaw opening that could restrict rescue bagging!
Evaluation of the Difficult Airway: Mallampati Classification

Safest
Consider consult help
No Way!!

Class I
Soft palate, fauces, uvula, anterior and posterior pillars

Class II
Soft palate, fauces, uvula

Class III
Soft palate, base of uvula

Class IV
Soft palate not visible at all

Patients with Mallampati Classification of 3 or greater are at a higher risk for difficulty during a moderate sedation.
Mallampati of 4… Do not perform moderate sedation without the aid of a service skilled in sedating higher risk patients such as anesthesia.
Evaluation of the Difficult Airway:
UPPER AIRWAY OBSTRUCTION

OPTIONS:
- COMPRESSABLE OR FIXED Lesion
- LOCATION (at or below larynx vs above larynx)

TIMING of OBSTRUCTION:
- MINUTES TO HOURS OR DAYS TO WEEKS
Ludwig’s Angina
Evaluation of the Difficult Airway:

Neck Mobility
Predictors of Difficult Mask Ventilation

MOANS
- Mask seal
- Obese
- Aged – > 55 yo
- Stiff – increased ventilatory pressures
Pre-MAS ‘Timeout’

Time Out (final verification). The Time Out is a deliberate pause in activity involving clear communication (that includes active listening and verbal confirmation of the patient, procedure, site and side) among all members of the surgical/procedural team. The procedure is not started until any questions or concerns are resolved. The Time Out includes verifying:

- Correct patient identity
- Correct procedure verified with consent
- Correct site and side (verified with site marking as per policy)
- Correct patient position
- Availability of correct implants and any special equipment or requirements
Rescue Airway Maneuvers

Partial or complete airway obstruction has many causes:

- Tongue
- Upper airway hemorrhage
- Dental fractures
- Secretions
- Vomitus
- Foreign bodies
- Airway swelling due to burns allergic reactions, etc.
Rescue Airway Maneuvers

The head-tilt, chin-lift maneuver is recommended for opening the airway if there is no chance of traumatic neck injury.
Rescue Airway Maneuvers

The modified jaw thrust is performed by grasping the mandibular rami at each angle and pulling forward while simultaneously pushing down on both sides of the chin with the thumbs.

Since the tongue is attached to the mandible, it is pulled anteriorly and inferiorly away from the glottis.
Rescue Airway Maneuvers

- Grasp the angles of the lower jaw and lift with both hands, one on each side, moving the jaw forward.
- If victim’s lips are closed, open the lower lip with your thumb.

Figure 4-1. Jaw thrust method.
Rescue Airway Adjuncts

Oral Airway

- Stimulates gag reflex/laryngospasm
- Bleeding and dental trauma possible

Nasal Airway

- not in basilar skull fx, nasal deformities
Rescue Airway Maneuvers

Patient Positioning

The patient who requires basic airway maneuvers to be performed should be placed supine on the flattest surface available at the beginning of resuscitation.

Patients who require cervical spine immobilization and are placed on a backboard should be secured to this board tightly enough so they will not slide or fall if the board is turned on its side to allow gravity to affect the drainage of vomitus or secretions.
Rescue Airway Maneuvers

Suctioning

Any patient in whom blood, secretions, vomitus or foreign body are present in the upper airway requires suction.

Suctioning should not exceed 15-second intervals before supplemental oxygen is reapplied in order to limit hypoxia, although it is also not desirable to push large amounts of unrecovered debris down the trachea and into the lower airways.

Suctioning should be performed under direct visualization of the posterior pharynx.
Bag Mask Ventilation

If the patient fails to respond to initial airway maneuvers with positioning, jaw thrust, nasal adjuncts and supplemental oxygenation with O2 sats decreasing below 90%…

Bag mask ventilation will be necessary
BMV STEPS

1.
BMV STEPS

2.
BMV STEPS

3.
Utilize nasal airway adjuncts in patients with intact gag reflexes
HAND HOLDS

5.

1-HAND TECHNIQUE

2-HAND TECHNIQUE
Drug Reversal

When unable to maintain adequate ventilation and O$_2$ sats above 90% despite rescue maneuvers and intervention with supplemental oxygen

Use reversal agents

- Romazicon for benzodiazepines
- Narcan for opiates
Drug Reversal

Both naloxone and romazicon have shorter durations of action than most opiates and benzodiazepines, so patients must be monitored for at least 60 minutes following return to baseline mental status to ensure patient does not resedate.

In patients who have received LARGE dosages of benzodiazepines or opiates the observation period may need to be extended to 120 minutes.
Remember always have a low threshold to consult anesthesia or another service skilled in procedural sedation whenever there is concern that the patient may have contraindications to performance of safe moderate sedation!