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Moderate Procedural Sedation: The Nuts and Bolts

What are you using for procedural sedation? Ketamine: bad rap or well deserved? Are you using propfol? There is new Medicare reimbursement for procedural sedation. Using a case-based approach, the speaker will discuss the nuances of each analgesic and anesthesia therapy in common use. Pitfalls in the use of these agents and new Medicare billing codes will be reviewed.

- Review the levels of procedural sedation.
- Discuss current drugs being used for sedation.
- Discuss the new Medicare billing codes and reimbursement.

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Moderate Procedural Sedation: The Nuts and Bolts

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Moderate Sedation in the ED

- Levels of Sedation
- Monitoring
- Medication Options
- Future Directions
- Billing Codes, Documentation, and Reimbursement

Sedation in the ED

- Numerous difficulties to the sedation process in the ED
 - Unpredictable NPO status
 - Unpredictable concurrent events
 - Time/bed constraints
 - Frequent concurrent severe systemic disease

Indications

- Generally a combination of two broad factors
 - Pain control during a short procedure
 - Need for patient compliance with a complex procedure

Levels of Sedation

- PSA practices are distinguished by the level of sedation, not the agent used
 - Level 1 Minimal Sedation (Anxiolysis)
 - Level 2 Moderate Sedation/analgesia
 - Level 3 Deep Sedation Analgesia
 - Level 4 Anesthesia

Level 1

- Minimal sedation
 - A drug-induced state during which patients respond appropriately to their developmental age to verbal commands
 - Cognitive function and coordination may be impaired, but ventilatory and cardiovascular functions are unaffected
 - Used when only anxiolysis is needed, with minimal pain or local pain control

Level 2

- Moderate Sedation (“conscious sedation”)
 - patients respond appropriately to their developmental age to verbal commands, either alone or with light tactile stimulation
 - No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate, and cardiovascular function is maintained
 - Usually associate with amnesia (1)

Level 3

- Deep Sedation/Analgesia
 - patients cannot be easily aroused and do not follow commands, but respond appropriately to their developmental age 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
 - Associated with amnesia but continued response to pain

Level 4

- Anesthesia
 - Patients are not arousable, even by painful stimulation
 - The ability to independently maintain ventilatory function is usually impaired, and patients often require assistance in maintaining a patent airway
 - Cardiovascular function may be impaired

Target level of Sedation

- The procedure is defined by the intended depth of sedation before the procedure begins
- Generally, the deeper the level of sedation, the higher the risk of complications (2)
 - The best level of sedation is usually the lightest one sufficient to complete the procedure and induce amnesia
 - Needs to be balanced with the patient's pre-procedure risk of an adverse outcome

Target Level of Sedation

- Targeting moderate sedation results in deep sedation about half of the time
- Targeting Deep Sedation results in moderate sedation about half of the time
- Neither moderate or deep sedation is associated with recall of the procedure

History and Co morbidity

- The urgency of the patient's requirement for PSA and the patient's current medical condition must be balanced
 - The ASA physical status score is a tool to describe this
- Asses the airway and ventilatory status
- Asses volume status
- Asses the baseline mental status

Procedural Urgency

- Emergent
 - Cardioversion with unstable arrhythmias
 - Reduction of fractures/dislocations with vascular compromise
 - Intractable pain
- Urgent
- Semi Urgent
- Routine

ASA Score (4)

- Class I: A normal healthy patient
- Class II: A patient with mild systemic disease
- Class III: A patient with severe systemic disease that limits disease but is not incapacitating
- Class IV: A patient with a severe systemic disease that is a constant threat to life
- Class V: A morbid patient who is not expected to survive with or without treatment

NPO status

- A recent guideline for Emergency Physicians (5) has made recommendations for the proper risk stratification of patients based of their last oral intake.
- The risk of aspiration increases with the depth of sedation, and must be balanced with the urgency of the procedure.

NPO Status

- Patients who have not had oral intake other than clear liquids for three hours prior to their procedure have a low risk of aspiration at any level of sedation.
- For patients with recent oral intake in need of an emergent procedure, the risk of aspiration is unlikely to outweigh the risk of delaying the procedure.
 - target the lightest level of sedation feasible for the necessary procedure.

NPO Status

- For urgent procedures
 - patients who have had a light snack should be limited to brief deep sedation
 - patients who have eaten a meal should be limited to moderate sedation
- For non-urgent procedures
 - time delay is unlikely to have a negative effect on the patient,
 - Delay procedure until three hours after their last intake.
- Intoxication with alcohol increases the risk of aspiration

Monitors

- Mechanical Monitors
- Interactive monitors

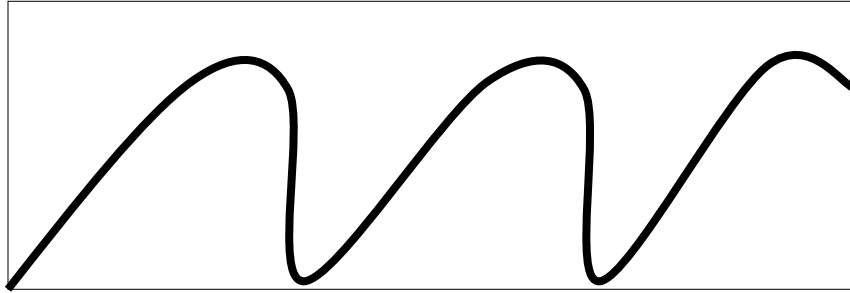
Mechanical Monitors

- Cardiac Monitors
 - Use is ubiquitous, scientific evaluation of efficacy is elusive
- Pulse Oximetry
 - Sensitive monitor of oxygenation
 - Does not monitor respiratory status
- Capnography
- Analog EEG (BIS and SNAP)

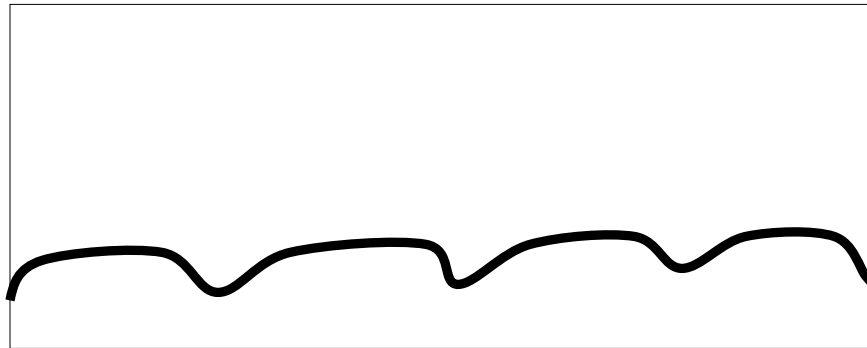
Capnography (6)

- Real time display of ventilation
 - Value is falsely decreased when the airway is obstructed
 - The frequency and amplitude of the waveform can be used to observe the respirations
 - Increases or decreases in end tidal CO₂ may indicate airway suppression either by obstruction (negative change) or decreased respiratory drive (positive change)

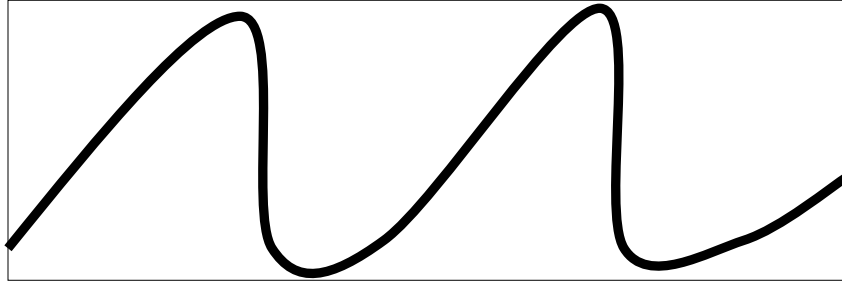
Normal ETCO₂ Waveform



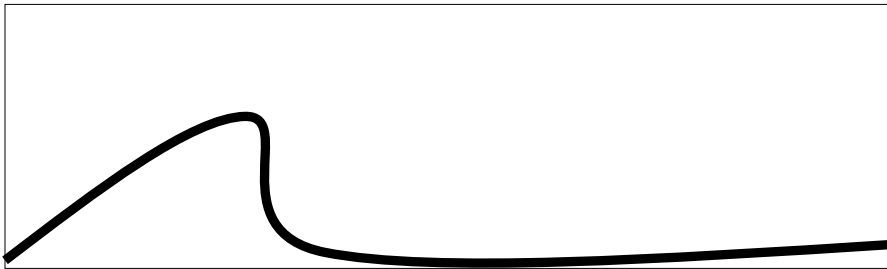
Airway Obstruction



Hypoventilation



Apnea

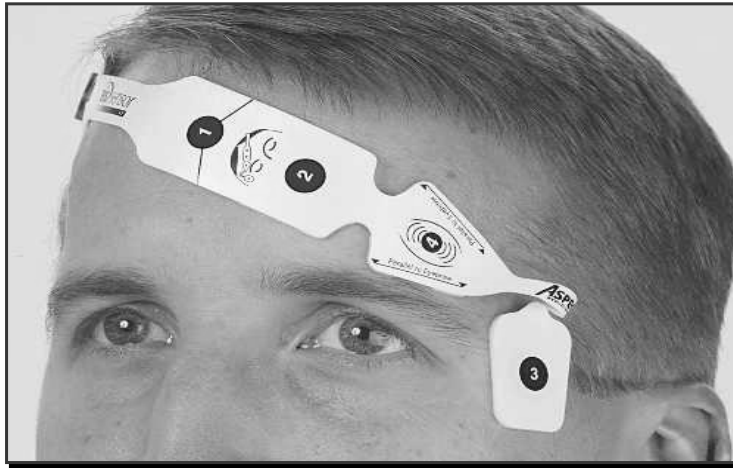


Analog EEG

- Single lead analog EEG scores give a 1-100 score representing the level of awareness
- Well studied in paralyzed patients in the OR
 - Tend to default to high scores in there is artifact
 - Do not work well in actively moving patients
 - Score processing is a few seconds slower than the clinical exam

Analog EEG

- EM studies have found (1,3,7-9)
 - Scores >85 are associated with recall of the procedure and pain
 - Scores between 70-85 have the same rate of respiratory depression as patients > 85, but a low rate of procedural recall
 - Scores <70 are associated with the same rate of recall as patients between 70-85, with a much higher rate of respiratory depression



Interactive Monitors

- Direct Observation of the patients to assess
 - Depth of sedation
 - Airway and ventilation
 - Hypoventilation
 - Apnea
 - Airway obstruction
 - Poor airway reflexes

Interactive monitoring

- Requires continuous observation of the patient's face, mouth and chest wall
- Moderate sedation requires at least two medical providers to achieve this
 - A physician to oversee the procedure
 - a nurse or respiratory therapist to interactively monitor the patient
 - The individual monitoring the patient should have no other responsibilities that interfere with direct airway observation

Procedural Pain

- Pain control throughout the experience of an injury is important to the patient's outcome
 - The surgical stress response (10-14)
 - Pre-emptive analgesia (15-19)
- The significance of brief procedural pain that a patient cannot later recall is difficult to determine

Pain Control

- Establish adequate pain control prior to beginning procedure
 - Morphine 0.1 mg/kg followed by 0.05 mg/kg q10-15
 - Fentanyl 1.5 ug/kg followed by 0.75 ug/kg q 5
 - The half life of pain medications is much longer than short acting anesthetics and they should be bolused separately

Supplemental Oxygen

- May delay changes in pulse oximetry (20-22)
- Similar rates of hypoxia in studies with supplemental o₂ (23-27) and without (22)

Sedation Management

- **Emergent Procedure**
 - Sedate single bolus agent, moderate sedation if possible
 - Perform Procedure
 - Begin analgesia therapy after sedation recovery
 - Repeat Sedation for further procedures if necessary with single bolus agent after complete recovery from first procedure

Sedation Management

- **Urgent, Semi-Urgent Procedure**
 - Analgesia
 - Single bolus or titrated agent based on estimated complexity of reduction
 - choose level based on need for relaxation, moderate and deep sedation are the same to the patient
 - Analgesia as needed

Agents

- Ketamine
- Fentanyl and Midazolam
- Methohexital
- Propofol
- Etomidate
- Pentobarbital

Ketamine (28)

- Dissociative anesthetic
- Analgesic and Amnestic Qualities
- Can be given IM or IV
- Not associated with hypotension
- Usually not associated with respiratory depression

IM Ketamine

- Generally provides sedation for 15 to 20 minutes, return to baseline mental status at 30 to 60 minutes
- Can be given 1-4 mg/kg IM

Ketamine

- 1 mg/kg
 - Lumbar puncture, splinting, burn dressing, complex laceration repair age > 7
- 2 mg/kg
 - Oral laceration repair age > 7, I and D abscess
- 3 mg/kg
 - Complex laceration repair age 1-7
- 4 mg/kg
 - Oral laceration repair age 1-7

IV Ketamine

- 1 mg/kg usually sufficient to induce dissociative state
- Onset 1 to 2 minutes
- Length of sedation 8-12 minutes
- Has a higher rate of respiratory depression than reported for IM ketamine (29)

Ketamine

- Complications
 - Hypersalivation
 - atropine 0.01 mg/kg (min. dose 0.1 max 0.3)
 - Laryngospasm
 - Hypoventilation
 - Emergence Phenomenon
 - midazolam 0.1 mg/kg (max 4 mg) may not be necessary (Walthen et. al.)

Fentanyl and Midazolam

- Given as midazolam 0.1 mg/kg IV (2 mg max) followed by fentanyl 1-4 mcg/kg IV
- Can be used for many different procedures
- Provides sedation for 30 to 60 minutes, return to baseline mental status 45 to 120 minutes

Fentanyl and Midazolam

- Complications
 - Hypoventilation
 - Highest rate of respiratory depression of the agents used in our ED
 - Hypotension
 - Prolonged sedation

Pentobarbital

- Generally used for radiologic procedures
 - Dosed at 2.5 mg/kg IV, followed by 1.25 mg/kg IV repeated once if necessary
 - Patients are monitored with pulse oximetry and observation
 - Patients tend to be very responsive to painful stimuli relative to other agents at the same level of sedation

Methohexital (26)

- Relatively deep sedation for short periods
- Generally dosed at 1 mg/kg IV bolus, with 0.5mg/kg boluses every three minutes as needed
- Sedation persists for 2 – 4 minutes, return to baseline mental status in 10 to 15 minutes

Methohexital

- Complications
 - Hypoventilation
 - Loss of protective airway reflexes
 - Hypotension
 - Quick progression into deeper than anticipated levels of sedation
 - Very difficult to titrate

Propofol (29)

- Relatively deep sedation for short periods
- Generally dosed at 1 mg/kg IV followed by 0.5 mg/kg IV q3 minutes
- Sedation persists for 2 –5 minutes, return to baseline mental status 10 to 15 minutes
- Similar indications as methohexital

Propofol

- Complications
 - Hypoventilation
 - Loss of protective airway reflexes
 - Hypotension
 - Quick progression into deeper than expected levels of sedation
 - Duration of action increases with the size of the dose

Propofol vs Methohexital

- We compared these two agents in 105 fracture reductions
 - Propofol was less associated with respiratory depression with same rate of procedural recall when a single bolus of medicine was used
 - Both agents had equivalent and higher rates of respiratory depression and procedural recall when multiple doses were required

Recall (1)

- We looked at patient recall using single word repetition
 - All patients who received 1 mg/kg of propofol had an amnestic period
 - No patient had recall of any word when they had a BIS score less than 90, regardless of their apparent level of alertness or responsiveness
 - There was a two minute period of retrograde amnesia from the time of the medication bolus

Etomidate (24,27,31,32)

- 0.1 – 0.3 mg/kg single bolus
- Duration of action longer than methohexital or propofol (7-10 minutes)
- Is not associated with hypotension
 - Has great potential for use in patients with ASA scores of 3 and 4

Etomidate

- Complications
 - Hypoventilation
 - Loss of protective airway reflexes
 - Myoclonic movements in 25% of patients (minor)
 - Cortisol suppression

Propofol vs Etomidate

- We compared these agents in two separate trials
 - In critically ill patients, both adequate as sedatives, hypotension seen only with propofol
 - RCT ASA1 and 2 patients, 102 etomidate and 103 propofol, respiratory depression the same, sedation the same depth, 25% if etomidate patients had myoclonus

Future Directions

- We are currently studying
 - Improving capnography
 - Propofol vs. Propofol with alfentanil
 - Ketamine vs Propofol in Adults
 - Alfentanil for minimal and moderate sedation
 - Nitous oxide vs. propofol

Summary

- Multiple agents and multiple indications
- Principle variable in sedation planning is the intended level of sedation
- Always prepare for the patient to progress to a level of sedation deeper than intended
- Patients who respond to pain from a previously sedated state are likely to have no recall of the procedure

Documentation and Billing

- Moderate Sedation and Deep Sedation have very different codes and reimbursement rates
 - Moderate Sedation can be billed by the same provider concurrently with another procedure
 - Deep sedation requires a separate physician from the procedure for which the patient is sedated

CPT code 99143 – 99150 definitions

99143	Moderate sedation services (other than those services described by codes 00100-01999) provided by the same physician performing the diagnostic or therapeutic service that the sedation supports, requiring the presence of an independent trained observer to assist in the monitoring of the patients level of consciousness and physiological status; under 5 years of age, first 30 minutes intra-service time
99144	Moderate sedation services (other than those services described by codes 00100-01999) provided by the same physician performing the diagnostic or therapeutic service that the sedation supports, requiring the presence of an independent trained observer to assist in the monitoring of the patients level of consciousness and physiological status; age 5 years or older, first 30 minutes intra-service time
99145	Moderate sedation services (other than those services described by codes 00100-01999) provided by the same physician performing the diagnostic or therapeutic service that the sedation supports, requiring the presence of an independent trained observer to assist in the monitoring of the patients level of consciousness and physiological status; each additional 15 minutes intra-service time (List separately in addition to code for primary service)
99148	Moderate sedation services (other than those services described by codes 00100-01999), provided by a physician other than the health care professional performing the diagnostic or therapeutic service that the sedation supports; under 5 years of age, first 30 minutes intra-service time
99149	Moderate sedation services (other than those services described by codes 00100-01999), provided by a physician other than the health care professional performing the diagnostic or therapeutic service that the sedation supports; age 5 years or older, first 30 minutes intra-service time
99150	Moderate sedation services (other than those services described by codes 00100-01999), provided by a physician other than the health care professional performing the diagnostic or therapeutic service that the sedation supports; each additional 15 minutes intra-service time (List separately in addition to code for primary service)

General Documentation Requirements for Moderate Sedation

- The physician should document the drug name, dose, age of the patient, and delivery method.
- The time that is billable is only the intra-service time, which excludes patient assessment. The start and stop time of the sedation should be documented.
 - Intra-service time begins with the administration of the sedation agent, requires continuous face-to-face attendance.
 - The stop time is at the conclusion of personal contact by the physician providing the sedation.
- Patient's pre- and post sedation assessment

Additional Documentation Requirements for Moderate Sedation

- **If provided by the same physician performing the diagnostic or therapeutic service that the sedation supports**
 - Documentation must indicate the presence of a trained observer other than the individual performing the procedure (usually a nurse), to assist the physician in monitoring the patient's level of consciousness and physiological status (pulse oximetry, cardiorespiratory monitoring, and blood pressure) for the duration of the moderate sedation.
 - This individual:
 - Should be trained in the recognition of complications associated with sedation/analgesia.
 - Should be capable of establishing a patent airway and positive pressure ventilation.
 - It is recommended that an individual with advanced life support skills be immediately available.
 - Should document separately

Additional Documentation Requirements for Moderate Sedation

- **If provided by a physician other than the health care professional performing the diagnostic or therapeutic service that the sedation supports**
 - Documentation must indicate monitoring the patient's level of consciousness and physiological status (pulse oximetry, cardiorespiratory monitoring, and blood pressure) for the duration of the moderate sedation.

Relative Value Unit (RVU) Information

- Moderate Sedation CPT Codes 99143-99150
 - CMS did not assign/publish RVU information on these codes. They are individually considered and reimbursement determination is made by the local carrier.
 - Currently, WPS the Medicare Part B carrier for MN is denying these services as POS/CPT conflict. (Pending Appeal)
 - DHS will only pay these codes "by report". Reimbursement is usually 33.5% of the practices usual and customary charge.
 - CPT Codes 99148-99150 are only allowed in a hospital setting.

Deep Sedation

- Many sedation codes are linked to procedures (e.g. shoulder reduction with anesthesia)
- Generally requires a separate physician
- Documentation requirements separate from procedure for which the patient is sedated

Documentation Requirements for Deep Sedation

- **Documentation should indicate that physician performed six steps:**
- **Pre-anesthetic examination and evaluation Pre-anesthesia Evaluation**
 - Patient interview to assess:
 - Medical history
 - Anesthetic history
 - Medication history
 - Appropriate physical examination.
 - Review of objective diagnostic data (e.g., laboratory, ECG, X-ray).
 - Assignment of ASA physical status.

Documentation Requirements for Deep Sedation

- **Prescribed the anesthesia plan**
 - **Target level of sedation**
 - Formulation of the anesthetic plan and discussion of the risks and benefits of the plan with the patient or the patient's legal representative
- **Personal participation in the most demanding procedures of the anesthesia plan, including induction and emergence**

Documentation Requirements Continued

- **Monitoring in the course of anesthesia administration at frequent intervals**
 - Immediate review prior to initiation of anesthetic procedures:
 - Patient re-evaluation
 - Check of equipment, drugs or gas
 - Monitoring of the patient
 - (electrocardiogram should be continuously displayed from the beginning of anesthesia until preparing to leave the anesthetizing location.
 - Every patient receiving anesthesia shall have blood pressure and heart rate determined and evaluated at least every five minutes
 - Amounts of drugs and agents used, and times of administration.
 - The type and amounts of intravenous fluids used, including blood and blood products, and times of administration.
 - The technique(s) used.
 - Unusual events during the administration of anesthesia.
 - The status of the patient at the conclusion of anesthesia.

Documentation Requirements Continued

- **Physical presence and availability for immediate diagnosis and treatment of emergencies**
- **Teaching Physician service: The ED teaching physician must document in the medical record that he/she was present during all critical (or key) portions of the procedure.**

Documentation Requirements Continued

- **Post-anesthesia care ASA Standards for Post-anesthesia care**
 - Discharge of the patient is a physician responsibility. This decision should be documented in the medical record.
 - A time-based record of vital signs and level of consciousness.
 - A time-based record of drugs administered, their dosage and route of administration
 - Type and amounts of intravenous fluids administered, including blood and blood products.
 - Any unusual events including post-anesthesia or post-procedural complications.
 - Post-anesthesia visits.

Deep Sedation Documentation Example

- **Performing the Procedure:** ER Physician A
- **Performing Anesthesia:** ER Physician B
- **Medications Summary**
 - **16:30 03/13/2006 Cefazolin Sodium 2grams IVPB in 100ml NS over 1 hour**
 - **16:36 03/13/2006 Propofol 1mg/kg IVP**
 - Total Amount Given: 100 mg
 - Confirmed With: ER Physician B
 - **16:42 03/13/2006 Propofol 1mg/kg**
 - Total Amount Given: 130
 - **16:43 03/13/2006 Propofol 1mg/kg IVP**
 - Total Amount Given: 155
 - **17:25 03/13/2006 Fentanyl 100mcg IVP**
 - Total Amount Given: 100 mcg

Example Continued: Example of Monitoring documented by RN through out the procedure and during recovery

- **16:30 03/13/2006 : Monitoring -- _____, RN**
- **Monitoring Equipment:** Pulse Oximeter, Non-invasive BP cuff, Cardiac Monitor, End Tidal CO₂
- **Cardiac Rhythm:** Normal sinus rhythm
- **Skin:** -CMS intact, -Skin warm & dry, -MAE - moves all extremities, Color - pink, Capillary refill - >2 sec, Pulses - distal present, Temperature - warm
- **Last Oral Intake:** 1130
- **ID Band on and confirmed:** Yes
- **16:39 03/13/2006 - Oximetry Oxygen:** 10L/min Mask
- **16:39 03/13/2006 - Document Cardiac Monitor Cardiac rhythm:** Normal sinus rhythm
- **16:39 03/13/2006: At Bedside Safety Precautions:** Resuscitation Equipment, Respiratory Care, Suction equipment hooked up and on, Side rails up
- **16:40 03/13/2006 : Procedure Begins Procedure:** I & D
- **16:40 03/13/2006 - Ramsey Sedation Scale:** 3 Eyes closed, resp to verbal command
- **16:41 03/13/2006 - Oxygen:** 10L/min Mask

Example Continued: Recovery Example Documented by RN

- **16:46 03/13/2006 - Sedation Recovery**
_____, RN
 - **Activity:** Moves 2 extremities & sustains head=2
 - **Respirations:** Age appr resp rate,coughs,clrs airway =2
 - **Circulation:** BP/HR WNL (50<HR<120) =2
 - **Consciousness:** Fully awake =2
 - **O2 Sat:** Requires O2 to maintain sat>90%=1
- **16:48 03/13/2006 - Sedation Recovery Activity: Moves 2 extremities & sustains head=2**
 - **Respirations:** Age appr resp rate,coughs,clrs airway =2
 - **Circulation:** BP/HR WNL (50<HR<120) =2
 - **Consciousness:** Fully awake =2
 - **O2 Sat:** Room air sat of >92% = 2
- **16:53 03/13/2006 -Oxygen: Room Air**

Example Continued: Recovery Documentation by RN

- **16:55 03/13/2006 - Response to Medication -- _____,**
RN
 - **Medication:** Propofol
 - **Response to treatment:** No adverse response to medication
- **Other Assessment:** No complaints, Physician with patient, Resting comfortably
- **16:59 03/13/2006 - Pain Duration:** 15, minutes
 - **Pain Severity:** 8/10
 - **Location:** Buttock

Example Continued: Recovery Example Documented by RN

- **18:01 03/13/2006 - Vital Signs** -- _____, RN
 - **BP:** 120/61 Automatic, Lying, R Arm
 - **HR:** 77
 - **Respiratory rate:** 21
 - **Pulse Oximetry:** 95
- **18:17 03/13/2006 - Reassessment** -- _____, RN
 - **Other Assessment:** No complaints, Disposition planning
 - **Pain Severity:** 4/10
 - **Note:** Pt is up and dressed with no dizziness or nausea. Pt ambulating with steady gait.
- **Intake and Output**
 - **Intake:** IV #1: NS - 500 ml
 - **Output:** Urine: Clear - Voided - 500 ml

Example Continued: Discharge Note

- **17:47 03/13/2006 - Ramsey Sedation** -- _____, RN
- **Ramsey Sedation Scale:** 2 Eyes open, cooperative, oriented
- **17:55 03/13/2006: Post Procedure** -- _____, RN
- **Discharge Criteria:** Alert, oriented or at baseline, Ambulatory or at baseline, Airway patent, no resp distress, Vital signs at baseline for patient, Able to take fluids PO, Nausea/vomiting/dizziness minimal, Bleeding or drainage minimal, Voided , Pain/discomfort acceptable to pt, Written/Verbal disch instructions given, Discharged with responsible adult, Confirmed designated driver

Example Continued: Physician Procedure Documentation

- **16:13 03/13/2006 - CS: ED Staff MD – ER Physician B**
- **Staff Physician:** ER Physician B
- **Procedure:** I & D
- **Monitoring Equipment:** Pulse Oximeter, Non-invasive BP cuff, Cardiac Monitor
- **Indications:** Painful Procedure, Inability to Cooperate
- **ASA Score:** P2E pt with mild systemic disease
- **Anesthesia Type:** Procedural Sedation Deep
- **16:24 03/13/2006 - PHYS Anesthesia HPI – ER Physician B**
- **Note:** Seen yesterday in ED for eval of buttock abscess. Given antibiotics and sent back to jail. Now with more buttock swelling and needs I and D. Large enough that he will need Procedural sedation
- **16:27 03/13/2006 - Informed Consent – ER Physician B**
- **Type of Consent:** Written consent obtained

Example Continued: Completed Procedure by ER Physician B

- **17:43 03/13/2006 - CS: Procedure Complete – ER Physician B**
 - **Procedure done by:** ER Physician A
 - **Sedation Outcomes:** Procedure complete w/o complication
 - **Sedation Level Achieved:** Deep
- **17:45 03/13/2006 - Anesthesia Proc Note – ER Physician B**
- **Anesthesia Phys Note:** Medications reviewed & concur w/nsg, Vital Signs reviewed & concur w/nsg
 - **Ramsey Sedation Scale:** 6 Eyes closed no resp noxious stimulus
 - **Anesthesia Fluids:** Normal Saline
 - **Anesthesia Medication(s):** Propofol
- **Anesthesia Complete:** Anesthesia care complete
- **Anesthesia Start Time:** 1610
- **Anesthesia End Time:** 1628

Coding Guidelines

- All Anesthesia values are determined by adding a basic value, which is related to complexity of the service, plus Modifying Units (if any), plus Time units.
- **Basic Value** includes the value of all usual anesthesia services except the time actually spent in anesthesia care. These activities include usual preoperative and postoperative visits, the administration of fluids and blood incident to anesthesia care, and monitoring services.
- **Time** units are allowed as 1 unit for each 15 minutes of anesthesia time. Anesthesia time begins when the physician begins to prepare the patient for anesthesia care and ends when the physician is no longer in personal attendance. Report the actual anesthesia time in minutes. The anesthesia practitioner can add blocks of anesthesia time around an interruption in anesthesia time as long as the anesthesia practitioner is furnishing continuous anesthesia care within the time periods around the interruption.
When more than one surgical procedure is performed, the anesthesia reimbursement will be based on the base unit value from the anesthesia procedure with the highest ASA value in addition to the total time that anesthesia was administered. (eg, Patient suffers multiple trauma and is having closed shoulder dislocation treatment & manipulation and closed fracture care of ankle. The anesthesia reported would the code with the highest ASA value in addition to the total time for both procedures).

Coding Guidelines Continued

- **Physical status modifiers (P1 - P5) are added in addition to the anesthesia code.**
 - **P1:** A normal healthy patient (0 units)
 - **P2:** A patient with mild systemic disease (0 units)
 - **P3:** A patient with severe systemic disease (1 unit)
 - **P4:** A patient with severe systemic disease that is a constant threat to life (2 units)
 - **P5:** A moribund patient who is not expected to survive without the operation (3 units)
 - **P6:** A declared brain dead patient whose organs are being removed for donor purposes. (0 units)
- Modifier units for patient health status, risk, age, or unusual circumstances charged additionally by a physician are not allowed by Medicare or DHS.
- Other payers may allow additional units for modifiers P1 – P5.

Reimbursement Methodology

- All anesthesia values are determined by adding a Base Value, which is related to the complexity of the service, plus Modifying Units (if any), plus time units (minutes/ 15).
- $((\text{Base Unit} + \text{Modifying Units} + (\text{minutes} / 15)) * \text{Conversion Factor})$
- Medicare Conversion Factor \$16.87
- DHS Conversion Factor \$18.00
- Other payers are determined by individual practice negotiated contracts.

Coding Guidelines Continued

- **Qualifying Circumstances** would be reported as additional procedure numbers qualifying anesthesia procedure or service. Modifier units are not allowed per Medicare and DHS except where noted. Modifier units include additional units charged by a physician for patient health status, risk, age, or unusual circumstances.
 - 99100: Anesthesia for patient of extreme age, under one year and over seventy 1 additional unit (DHS Allows)
 - 99116: Anesthesia complicated by utilization of total body hypothermia 5 additional units
 - 99135: Anesthesia complicated by utilization of controlled hypotension 5 additional units
 - **99140: Anesthesia complicated by emergency conditions (specify) 2 additional units**
An emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part.

Coding Guidelines Continued

- **Add modifiers to surgical CPT code**
 - **AA:** Physician personally performed
 - **QK:** Medical direction by a physician of two, three, or four concurrent anesthesia procedures
 - **QS:** (MAC) Monitored Anesthesia case service (secondary modifier). The QS modifier is for informational purposes. Documentation modifiers (AA, QK) must be billed in the first modifier field and if QS modifier applies, it must be placed into the second modifier field.
 - **GC:** This service has been performed in part by a resident under the direction of a teaching physician

Separately Coded Services

- **Separately coded services from anesthesia procedure:**
 - Swan-Ganz catheter insertion (CPT 93503)
 - Central Venous Pressure (CVP) line insertion (CPT 36488 – 36491)
 - Intra-arterial lines insertion (CPT 36620-36625)
 - Transesophageal echocardiography (CPT 93312-93318)
- **Emergency intubation (CPT 31500) cannot be billed separately and is considered an integral part of the anesthesia care and included in the base anesthesia services.**

Procedure /Anesthesia Codes

CPT Code	Description	Anesthesia Code	Anesthesia Base RV
23655	Closed treatment of shoulder dislocation, with manipulation; requiring Anesthesia	01620	4
24605	Treatment of closed elbow dislocation; requiring anesthesia	01730	3
26675	Closed treatment of carpometacarpal dislocation, other than thumb, with manipulation, each joint; requiring anesthesia	01820	3
26705	Closed treatment of metacarpophalangeal dislocation, single, with manipulation; requiring anesthesia	01820	3
26775	Closed treatment of interphalangeal joint dislocation, single, with manipulation; requiring anesthesia	01820	3

CPT Code	Description	Anesthesia Code	Anesthesia Base RV
27252	Closed treatment of hip dislocation, traumatic; requiring anesthesia	01200	4
27257	Treatment of spontaneous hip dislocation (developmental, including congenital or pathological), by abduction, splint or traction; with manipulation, requiring anesthesia	01200	4
27266	Closed treatment of post hip arthroplasty dislocation; requiring regional or general anesthesia	01200	4
27552	Closed treatment of knee dislocation; requiring anesthesia	01380	3
27562	Closed treatment of patellar dislocation; requiring anesthesia	01390	3
27831	Closed treatment of proximal tibiofibular joint dislocation; requiring anesthesia	01462	3
27842	Closed treatment of ankle dislocation; requiring anesthesia, with or without percutaneous skeletal fixation	01462	3

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