Monitored Anesthesia Care (MAC) during Gastrointestinal Endoscopy, Bronchoscopy, or Interventional Pain Procedures in Outpatient Settings
Corporate Medical Policy

File name: Monitored Anesthesia Care (MAC) during Gastrointestinal Endoscopy Bronchoscopy, or Interventional Pain Procedures in Outpatient Settings
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Description
Adequate sedation and analgesia are important parts of diagnostic and therapeutic endoscopic procedures. Various levels of sedation and analgesia (anesthesia) may be used, depending on the patient’s status and the procedure being performed. This policy addresses the potential role of dedicated anesthesia providers during procedures performed in a properly equipped and staffed outpatient setting.

Policy
When a service may be considered medically necessary

Use of monitored anesthesia care may be considered medically necessary for gastrointestinal endoscopy, bronchoscopy, and interventional pain procedures, when there is documentation by the proceduralist and anesthesiologist that specific risk factors or significant medical conditions are present. Those risk factors or significant medical conditions include any of the following:

- Increased risk for complications due to severe comorbidity (ASA P3* or greater)
- Morbid obesity (BMI [body mass index] >40)
- Documented sleep apnea
- Inability to follow simple commands (cognitive dysfunction, intoxication, or psychological impairment)
- Spasticity or movement disorder complicating procedure
- History or anticipated intolerance to standard sedatives, such as:
  - Chronic opioid use
  - Chronic benzodiazepine use
• Patients with active medical problems related to drug or alcohol abuse
• Patients younger than 18 years or 70 years or older
• Patients who are pregnant
• Patients with increased risk for airway obstruction due to anatomic variation, such as:
  – History of stridor
  – Dysmorphic facial features
  – Oral abnormalities (e.g., macroglossia)
  – Neck abnormalities (e.g., neck mass)
  – Jaw abnormalities (e.g., micrognathia)
• Acutely agitated, uncooperative patients
• Prolonged or therapeutic gastrointestinal endoscopy procedures requiring deep sedation (see Policy Guidelines section).

*American Society of Anesthesiologists (ASA) physical status classification system for assessing a patient before surgery:

  P1 - A normal, healthy patient
  P2 - A patient with mild systemic disease
  P3 - A patient with severe systemic disease
  P4 - A patient with severe systemic disease that is a constant threat to life
  P5 - A moribund patient who is not expected to survive without the operation
  P6 - A declared brain-dead patient whose organs are being harvested

When a service is considered not medically necessary

Use of monitored anesthesia care is considered not medically necessary for gastrointestinal endoscopic, bronchoscopic, or interventional pain procedures in patients at average risk related to use of anesthesia and sedation.

Policy Guidelines

Billing/Coding Information

Click the links below for attachments, coding tables & instructions.
Attachment I- CPT Coding Table & Instructions

Monitored anesthesia care can be provided by qualified anesthesia personnel with training and experience in:

• Patient assessment
• Continuous evaluation and monitoring of patient physiological functions
• Diagnosis and treatment (both pharmacological and non-pharmacological) of any and all deviations in physiological function.
Examples of prolonged endoscopy procedures that may require deep sedation include adhesions post-abdominal surgery, endoscopic retrograde cholangiopancreatography, stent placement in the upper GI tract, and complex therapeutic procedures such as plication of the cardioesophageal junction.

The Mallampati score is considered a predictor of difficult tracheal intubation and is routinely used in preoperative anesthesia evaluation. The score is obtained by having the patient extend the neck, open the mouth, and extend the tongue while in a seated position. Patients are scored from Class 1-4 as follows:

Class 1 - the tonsils, uvula and soft palate are fully visible

Class 2 - the hard and soft palate, uvula and upper portion of the tonsils are visible

Class 3 - the hard and soft palate and the uvula base are visible

Class 4 - only the hard palate is visible.

Patients with Class 3 or 4 Mallampati scores are considered to be at higher risk of intubation difficulty. While the Mallampati score does not determine a need for monitored anesthesia care, it may be considered in determining risk for airway obstruction. Other tests to predict difficult tracheal intubation include the upper lip bite test, the intubation difficulty scale, and the Cormack-Lehane grading system.

For reference, the add-on code for anesthesia for patient of extreme age is:

99100 - Anesthesia for patient of extreme age, younger than 1 year and older than 70 (List separately in addition to code for primary anesthesia procedure).

Background

MAC is a spectrum of anesthesia services defined by the type of anesthesia personnel present during a procedure, not specifically by the level of anesthesia needed. The American Society of Anesthesiologists (ASA) has defined MAC. The following is derived from ASA statements:

Monitored anesthesia care is a specific anesthesia service for a diagnostic or therapeutic procedure. Indications for monitored anesthesia care include the nature of the procedure, the patient’s clinical condition and/or the potential need to convert to a general or regional anesthetic.

Monitored anesthesia care includes all aspects of anesthesia care—a preprocedure visit, inprocedure care, and postprocedure anesthesia management. During monitored anesthesia care, the anesthesiologist provides or medically directs a number of specific services, including but not limited to:

- Diagnosis and treatment of clinical problems that occur during the procedure
- Support of vital functions
- Administration of sedatives, analgesics, hypnotics, anesthetic agents or other medications as necessary for patient safety
• Psychological support and physical comfort
• Provision of other medical services as needed to complete the procedure safely.

MAC may include varying levels of sedation, analgesia, and anxiolysis as necessary. The provider of MAC must be prepared and qualified to convert to general anesthesia when necessary. If the patient loses consciousness and the ability to respond purposefully, the anesthesia care is a general anesthetic, irrespective of whether airway instrumentation is required.

MAC refers to a particular type of physician service, and not to the level of anesthesia provided. MAC often involves the provision of sedatives and/or analgesics to induce moderate sedation but may also involve the use of sedatives, hypnotics, analgesics, and anesthetic drugs which are commonly used for the induction and maintenance of general anesthesia.

In 2004, the ASA defined 4 levels of sedation/analgesia as follows:

Minimal sedation (anxiolysis): is a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilator and cardiovascular function are unaffected.

Moderate sedation/analgesia (“conscious” sedation): is 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: is 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 may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

General anesthesia: is a drug-induced depression of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilator 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.

Because sedation is a continuum, it is not always possible to predict how an individual patient will respond. Hence, practitioners intending to produce a given level of sedation should be able to rescue patients whose level of sedation becomes deeper than initially intended. Individuals administering moderate sedation/analgesia (conscious sedation) should be able to rescue patients who enter a state of deep sedation/analgesia, while those administering deep sedation/analgesia should be able to rescue patients who enter a state of general anesthesia.

Multiple diagnostic and therapeutic procedures performed in the outpatient setting, including endoscopy, colonoscopy, bronchoscopy, and interventional pain
management procedures, rely on some degree of sedation for anxiolysis and pain control. Regardless of sedation depth, sedation and anesthesia services that are provided in outpatient settings should be administered by qualified and appropriately trained personnel. Moderate sedation is generally sufficient for many diagnostic and uncomplicated therapeutic procedures. Moderate sedation using benzodiazepines, with or without narcotics, is frequently administered under the supervision of the proceduralist.

According to ASA’s standard for monitoring, MAC should be provided by qualified anesthesia personnel, including physicians and nurse specialists. By this standard, the personnel must be in addition to the proceduralist and must be present continuously to monitor the patient and provide anesthesia care. For patients at high risk of an unsuccessful procedure under moderate sedation, this allows for the safe continuation of the procedure under deep sedation or general anesthesia by trained personnel.

Moderate sedation can be achieved using pharmacologic agents for sedation, anxiolysis, and analgesia. A frequently used combination is an opioid and benzodiazepine, for example, fentanyl with midazolam at doses individualized to obtain the desired sedative effect. Other combinations have also been used for this purpose. While both benzodiazepines and opioids can cause respiratory depression, effective reversal agents exist for both.

Propofol is an agent that has been increasingly used to provide sedation for procedures. Propofol is associated with a rapid onset of action and fast recovery from sedation. However, there have been concerns about potential adverse effects and safety when used by nonanesthesiologists. Propofol has the potential to induce general anesthesia, and there is no pharmacologic antagonist to reverse its action. When used as moderate sedation, propofol may be administered by anesthesia personnel or under the direction of the proceduralist. ASA has offered practice guidelines for the provision of sedation by nonanesthesiologists, stating that personnel must be prepared to respond to deep sedation and loss of airway protection should these complications inadvertently occur during sedation.

**Regulatory Status**

In October, 1989 Propofol “Diprivan®” (AstraZeneca) was first approved by the U.S. Food and Drug Administration (FDA) through the premarket approval process for the induction and maintenance of anesthesia. The current FDA-approved label for Diprivan® states that it is indicated for initiation and maintenance of monitored anesthesia care (MAC) sedation, combined sedation and regional anesthesia, or intensive care unit (ICU) sedation of intubated, mechanically ventilated patients (adults only). It is also approved for induction of general anesthesia in patients older than or equal to 3 years of age and maintenance of general anesthesia in patients older than or equal to 2 months of age and older.

There are multiple other FDA-approved medications for pain relief, anxiolysis, and sedation that may be used in outpatient sedation.
This policy only addresses anesthesia services for diagnostic or therapeutic procedures involving gastrointestinal (GI) endoscopy, bronchoscopy and interventional pain procedures performed in the outpatient setting.

**Rationale**

This policy is updated regularly with searches of the MEDLINE database. The most recent literature review was through January 9, 2015.

One updated systematic review on the use of propofol for sedation during colonoscopy has been published by the Cochrane Collaboration. One randomized controlled trial (RCT) has examined use of moderate sedation with monitored anesthesia care (MAC) against moderate sedation without monitored care; it has been published in abstract form only. Many of the RCTs and comparative studies have focused on comparisons of agents for moderate sedation. Many recommendations for the indications for MAC are derived from narrative reviews and expert opinion. The following is a summary of the key literature to date.

**Use of Monitored Anesthesia Care in Endoscopy**

An extensive review of the literature related to sedation for gastrointestinal (GI) tract endoscopy was published through the American Gastroenterological Association Institute in 2007, some of which is relevant for this policy. The review recommended that use of an anesthesia professional should be strongly considered for American Society of Anesthesiologists (ASA) physical status 3 through 5 patients. The authors noted that other possible indications for an anesthesia specialist include patients with pregnancy, morbid obesity, neurologic or neuromuscular disorders, a history of alcohol or substance abuse, and patients who are uncooperative or delirious. They also noted that endoscopic procedures that may require an anesthesia specialist include endoscopic retrograde cholangiopancreatography (ERCP), stent placement in the upper GI tract, and complex therapeutic procedures such as plication of the cardioesophageal junction. This review was used in formulating the initial conclusions of this policy.

Enestvedt et al retrospectively reviewed 1,318,495 patients who underwent 1,590,648 endoscopic procedures and found the risk for serious adverse events with endoscopy increased with higher ASA physical status classification, especially class 3 to 5. These findings support the use of ASA physical status class as a predictor of periendoscopic adverse events (AEs) and as a useful tool for risk stratification.

Agostoni et al evaluated a prospective database of 17,999 GI endoscopies performed under MAC during the period of October 2001 to December 2009. The authors identified 6 variables predicting any sedation-related complication using multivariate logistic regression models: age (1-year odds ratio [OR], 1.02; 95% confidence interval [CI], 0.01 to 1.02), body mass index [BMI] (1-point OR=1.03; 95% CI, 0.02 to 1.05), ASA score (3-4 vs 1-2 OR=1.69; 95% CI, 1.44 to 1.99), Mallampati score (3-4 vs 1-2 OR=1.33; 95% CI, 1.04 to 1.70), emergency nature of the procedure (OR=1.48; 95% CI, 1.13 to 1.94), length of the procedure (OR=2.00; 95% CI, 1.78 to 2.24). The authors noted the Mallampati score is used to assess potential difficulty in tracheal intubation, and it is unclear why this score was predictive of any complication.
In a prospective cohort study of 470 ERCP patients receiving MAC, Berzin et al reported adverse respiratory events were strongly associated with higher BMI using multivariate regression models. (OR=1.08, p<0.001) Patients with obesity experienced respiratory events almost twice as often as nonobese patients (p=0.03). Higher ASA class was not associated with adverse respiratory events under MAC (OR=1.2, p=0.25) but was associated with cardiovascular events (OR=2.88, p<0.001).

Coté et al reported another prospective observational study on 766 patients undergoing advanced endoscopic procedures such as ERCP, endoscopic ultrasound, and small-bowel enteroscopy who received propofol. These procedures are notable for their duration and complexity compared with diagnostic esophagogastroduodenoscopy (EGD). The primary outcome measure was airway modifications (AM), with a comparison of defining characteristics of the group requiring at least 1 AM, such as chin lift or nasal airway, to those requiring no modification. No patients in the study required endotracheal intubation. BMI, male sex, and ASA class 3 or above were associated with a need for AM. Patients in this study received anesthesia from a certified registered nurse anesthetist and generally had a level of deep sedation, and thus their care continues to meet the definition of MAC.

Conclusions

Evidence-based guidelines about the use of sedation for endoscopy have addressed the use of MAC, and subsequent studies have demonstrated higher sedation complication rates in higher ASA scored patients.

The evidence base comparing different anesthetic methods is not robust, consisting primarily of nonrandomized comparisons and observational studies. A single RCT comparing propofol administration by anesthesiologists with that by nonanesthesiologists for sedation during colonoscopy did not show any differences in procedure time or patient satisfaction and reported a higher rate of hypoxia in patients treated with propofol. However, a Cochrane review of randomized studies concluded that recovery time, discharge time, and patient satisfaction were all improved with propofol compared with alternative agents. This review did not find any evidence of increased complications. However, this evidence base does not rule out an increased complication rate with propofol, because there is a low complication rate in general, thus making it difficult to discern differences in the absence of large RCTs.

Use of Monitored Anesthesia Care in Bronchoscopy

In 2009, Silvestri and colleagues published an RCT comparing 2 doses of the sedative agent fosPropofol in patients undergoing diagnostic bronchoscopy. The study was performed by pulmonologists without anesthesia supervision. Patients (n=252) were randomly assigned to receive either 2 mg/kg or 6.5 mg/kg induction doses of fosPropofol, followed by additional doses per protocol. All patients received a pre-procedural dose of fentanyl. The primary endpoint was sedation success using the Modified Observer’s Assessment of Alertness/Sedation (MOAA/S). A secondary endpoint was treatment success, as measured by percentage of patients who did not require alternate sedation or ventilation. The higher dose group had greater sedation success
(88.7% vs. 27.5%, respectively; p<0.001). Treatment success also favored the higher dose group (91.3% vs. 41.25, respectively; p<0.001). Adverse events were higher for the higher dose group; for example, the number of patients requiring any type of airway assistance (33 vs. 14, or 21.5% vs. 13.6%, respectively). The trial does not compare alternate sedation approaches; that comparison is necessary to evaluate the clinical value of the fosPropofol sedation strategy for bronchoscopic procedures.

The British Thoracic Society published guidelines for flexible bronchoscopy in 2001 and updated these guidelines in 2013. With respect to sedation, the guidelines state that sedation should be offered, patients should be monitored during and immediately after the procedure and that at least 2 assistants, at least 1 a qualified nurse, should be in attendance. Resuscitation equipment should be readily available. Sedation should be limited to a depth which permits verbal contact at all times. The preferred sedation agent is a benzodiazepine, intravenous midazolam.

**Interventional Pain Management Procedures**

In 2008, Bernards and colleagues published a review of the literature around neurologic complications of regional anesthesia in anesthetized or heavily sedated patients. Some experts postulate that the inability of a sedated patient to express atypical symptoms during a regional block may lead to increased risk of injury. No comparative studies have been done, and limited information is available from registries. The American Society of Regional Anesthesia (ASRA) and Pain Medicine has acknowledged the scarce and conflicting literature on the topic and recommends carefully weighing the risks and benefits in considering performing those procedures while the patient is heavily sedated or anesthetized.

In 2005, ASA released a statement on anesthetic care during interventional pain procedures. While recognizing that conditions exist which may make skilled anesthesia care necessary, most minor pain procedures, under most routine circumstances, do not require anesthesia care other than local anesthesia.

**Other Procedures**

Any procedure which may be complicated by patient characteristics noted in the policy statement may be appropriate for MAC.

**Pregnancy**

Concerns regarding procedures and sedation during pregnancy are two-fold: sensitivity of the fetus to the agents and/or procedural hypotension and maternal factors that increase sensitivity to sedation and that make intubation more difficult in an emergency situation. In a large (n=720,000) Swedish registry of pregnant patients from the 1970s and 1980s, 5,405 operations took place. Congenital malformations and stillbirths were not increased in the offspring of women having an operation. Incidence of low birth weight infants was increased as a result of both prematurity and intrauterine growth retardation. Neonatal death was also increased in the patients who
had an operation. No specific types of anesthesia or operation were associated with these outcomes. The contribution of the underlying condition which led to the need for surgery could not be separated from the effects of the surgery or sedation/anesthesia.

Fetal heart rate monitoring is considered to be a more sensitive indicator of placental perfusion and fetal oxygenation than observations of maternal hemodynamic stability alone. The American College of Obstetricians and Gynecologists (ACOG) has recommended that the use of intermittent or continuous fetal monitoring during surgery be individualized.

Physiologic changes in pregnancy may require changes in standard doses of anesthetic or sedative agents. However, Propofol does not generally require a change in loading dose for induction. Physiologic changes in pregnancy may warrant MAC when airway protection becomes necessary, due to additional difficulties noted with emergent intubation in pregnant patients and the urgency to restore full oxygenation to the maternal and fetal patients. Thus MAC can be considered medically necessary for procedures performed during pregnancy.

**Ongoing Clinical Trials**

A search of ClinicalTrials.gov on January 13, 2015, identified the following RCTs evaluating anesthesia options for endoscopy, bronchoscopy, or interventional pain procedures:

- **RCT of Efficacy and Safety of Sedation Compared to General Anesthesia for ERCP (NCT02046590):** This is a randomized, double-blind, active-comparator trial to compare deep sedation with propofol with general anesthesia for therapeutic endoscopic retrograde ERCP. The primary outcome is ERCP success rate. Enrollment is planned for 132 subjects; the estimated study completion date is January 2015.

- **Moderate Sedation for Elective Upper Endoscopy With Balanced Propofol Versus Propofol Alone: a Randomized Clinical Trial (NCT02174588):** This is a randomized, open-label trial to compare propofol alone with propofol plus midazolam for anesthesia for patients undergoing ERCP. The primary outcome is patient satisfaction measured on a visual analogue scale. Enrollment is planned for 140 subjects; the estimated study completion date is November 2015.

- **Non-anesthesiologist Administered Propofol Sedation for Colonoscopy - a Randomized Clinical Trial (NCT02067065):** This is a randomized, single-blinded, active comparator trial to compare non-anesthesiologist-administered propofol sedation with anesthesiologist-administered propofol sedation among patients undergoing elective total colonoscopy. The primary outcome measure is the rate of minor adverse events. Enrollment is planned for 400 subjects; the estimated study completion date was June 2014, but no published results were identified.

- **Satisfaction With Nurse Administered Propofol Sedation vs. Midazolam With Fentanyl Sedation for Endoscopy (NCT01934088):** This is a randomized, open-label trial to compare nurse-directed anesthesia with propofol with nurse-directed
anesthesia with midazolam/fentanyl among patients undergoing endoscopy. The primary outcome measure is patient satisfaction. Enrollment is planned for 200 subjects; the estimated study completion date was December 2014, but no published results were identified.

- Nurse Administered Propofol Sedation vs. Midazolam With Fentanyl-sedation for Flexible Bronchoscopy: A Randomized, Single Blind, Controlled Study of Satisfaction and Safety (NCT02226328): This is a randomized, open-label trial to compare nurse-directed anesthesia with propofol with nurse-directed anesthesia with midazolam/fentanyl among patients undergoing elective flexible bronchoscopy endoscopy. The primary outcome measure is patient satisfaction. Enrollment is planned for 128 subjects; the estimated study completion date is December 2015.

Summary of Evidence

Comparative evidence that supports the use of monitored anesthesia care (MAC) in specific procedures is limited. Evidence from noncomparative studies indicates that physician-directed moderate sedation is a safe and effective alternative to MAC for most patients undergoing procedures in whom deep sedation or anesthesia is unnecessary, such as gastrointestinal (GI) endoscopy, bronchoscopy, and interventional pain procedures. Propofol may be used both for general anesthesia and moderate sedation. The principal differences between propofol and the traditional agents used in these clinical trials of moderate sedation are a shorter recovery period (mean, 14.2 minutes), shorter discharge time, and higher overall satisfaction scores. Pain control and incidence of complication rates appear to be similar overall, but the available evidence does not rule out small differences in these outcomes. Patient characteristics, such as comorbidities, airway features, or the ability to cooperate with the proceduralist, may predict the need for greater depth of sedation or a greater likelihood of needing an intervention to support physiologic functions during sedation. The use of MAC may be considered medically necessary in cases with specific risk factors or significant medical conditions as indicated in the policy statement.

Practice Guidelines and Position Statements

In 2004, and amended in 2009, the American Society of Anesthesiologists released a statement on the safe use of Propofol:

“The Society believes that the involvement of an anesthesiologist in the care of every patient undergoing anesthesia is optimal. However, when this is not possible, non-anesthesia personnel who administer Propofol should be qualified to rescue patients whose level of sedation becomes deeper than initially intended and who enter, if briefly, a state of general anesthesia.”

Recent guidelines regarding sedation during endoscopy were released by the American Society for Gastrointestinal Endoscopy (ASGE). These guidelines indicate “Adequate and safe sedation can be achieved in most patients undergoing routine esophagastroduodenoscopy [EGD] and colonoscopy by using an intravenous benzodiazepine and opioid combination.” These guidelines also include a discussion of
use of Propofol for routine endoscopy, and their overall conclusion is that “clinically important benefits in average-risk patients undergoing upper endoscopy and colonoscopy have not been consistently demonstrated with regard to patient satisfaction and safety. Therefore, the routine use of Propofol in average-risk patients cannot be endorsed.” In addition to addressing the efficacy and safety of Propofol, the guidelines discuss the issue of who is qualified to administer Propofol. The ASGE endorses gastroenterologist-directed Propofol use when adequate training for its use has been achieved. Numerous case series studies were cited showing very low rates of clinical adverse events when Propofol was administered by registered nurses under gastroenterologist supervision.

In 2014, ASGE issued guidelines on the safety of the endoscopy unit that made several recommendations regarding procedural sedation:

- **Recommendations for Intraprocedure Staffing Based on Level of Sedation**
  - No sedation - One assistant other than the physician performing the procedure should be present to assist with the technical aspects of the procedure.
  - Moderate sedation (also known as conscious sedation) - Sedation should be directed by a physician who is credentialed and privileged to do so. Moderate sedation can be administered by an RN. During the period in which the patient is sedated, the RN must monitor the patient for vital sign changes, hypoxemia, and comfort. The RN may assist with minor, interruptible tasks. In the event that more intense technical assistance is required, a second assistant (RN, LPN, or UAP) should be available to join the care team for the technical aspects of the procedure.
  - Deep sedation - Most institutions require that deep sedation be administered by an anesthesia professional such as an anesthesiologist, certified registered nurse anesthetist (CRNA), or anesthesiologist assistant who is credentialed and privileged to do so. In this situation, the anesthesia provider should be responsible for administering sedation and monitoring the patient. A second staff person is required to assist with technical aspects of the procedure.

- **Recommendations for Patient Monitoring**
  - All patients undergoing endoscopy should be monitored, the frequency of which depends on procedural and patient factors (e.g., type of sedation, duration and complexity of procedure, patient condition). At a minimum, monitoring should be performed before the procedure, after administration of sedatives, at regular intervals during the procedure, during initial recovery, and just before discharge.
  - Units should have procedures in place to rescue patients who are sedated deeper than intended.
  - When the target level is moderate sedation (also known as conscious sedation):
    - The individual assigned responsibility for patient monitoring may perform brief, interruptible tasks.
Minimal monitoring requirements include electronic assessment of blood pressure, respiratory rate, heart rate, and pulse oximetry combined with visual monitoring of the patient's level of consciousness and discomfort.

Currently, there are inadequate data to support the routine or required use of capnography during endoscopic procedures in adults when moderate sedation is the target.

When deep sedation is targeted:

- The individual responsible for patient monitoring must be dedicated solely to that task and may not perform any other function during the procedure.
- The use of capnography in endoscopic ultrasound, ERCP, and colonoscopy to assess the adequacy of ventilation may reduce the incidence of hypoxemia and apnea, but its impact on the frequency of other sedation-related adverse events such as bradycardia and hypotension is unknown. As such, capnography may be considered for the performance of endoscopy under deep sedation. However, there is no safety data to date to support the universal use of capnography in such cases.
- Documentation of the clinical assessments and monitoring data during sedation and recovery is required.

In 2010, the European Society of Gastrointestinal Endoscopy released guidelines on non-anesthesiologist-administration of propofol (NAAP) which stated, “Compared with traditional sedation, propofol-based sedation presents similar rates of adverse effects, provides higher postprocedure patient satisfaction for most endoscopic procedures, decreases time to sedation, and decreases recovery time (and may therefore decrease discharge time compared with traditional sedation). Propofol-based sedation may also increase the quality of endoscopic examination. There are no cost-effectiveness data directly comparing specifically NAAP with traditional sedation or monitored anesthesia care for gastrointestinal endoscopy. (Evidence level 1+.)”

In 2005, ASA released a statement on anesthetic care during interventional pain procedures. While recognizing that conditions exist which may make skilled anesthesia care necessary, most minor pain procedures, under most routine circumstances, do not require anesthesia care other than local anesthesia.

References

1. Blue Cross and Blue Shield Association. Monitored Anesthesia Care MPRM# 7.02.01. Last reviewed: 02/2015.


Document Precedence

Blue Cross and Blue Shield of Vermont (BCBSVT) Medical Policies are developed to provide clinical guidance and are based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. The applicable group/individual contract and member certificate language, or employer’s benefit plan if an ASO group, determines benefits that are in effect at the time of service. Since medical practices and knowledge are constantly evolving, BCBSVT reserves the right to review and revise its medical policies periodically. To the extent that there may be any conflict between medical policy and contract/employer benefit plan language, the member’s contract/employer benefit plan language takes precedence.
Audit Information

BCBSVT reserves the right to conduct audits on any provider and/or facility to ensure compliance with the guidelines stated in the medical policy. If an audit identifies instances of non-compliance with this medical policy, BCBSVT reserves the right to recoup all non-compliant payments.

Administrative and Contractual Guidance

Benefit Determination Guidance

Prior approval is required for services as outlined in Attachment I. Benefits are subject to all terms, limitations and conditions of the subscriber contract.

An approved referral authorization for members of the New England Health Plan (NEHP) is required. A prior approval for Access Blue New England (ABNE) members is required. NEHP/ABNE members may have different benefits for services listed in this policy. To confirm benefits, please contact the customer service department at the member’s health plan.

Federal Employee Program (FEP): Members may have different benefits that apply. For further information please contact FEP customer service or refer to the FEP Service Benefit Plan Brochure. It is important to verify the member’s benefits prior to providing the service to determine if benefits are available or if there is a specific exclusion in the member’s benefit.

Coverage varies according to the member’s group or individual contract. Not all groups are required to follow the Vermont legislative mandates. Member Contract language takes precedence over medical policy when there is a conflict.

If the member receives benefits through an Administrative Services Only (ASO) group, benefits may vary or not apply. To verify benefit information, please refer to the member’s employer benefit plan documents or contact the customer service department. Language in the employer benefit plan documents takes precedence over medical policy when there is a conflict.

Policy Implementation/Update information

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>07/2009</td>
<td>New Policy</td>
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<tr>
<td>02/2011</td>
<td>Clarifications to “when services may be covered”. Policy guidelines combined into “when services may be covered” section.</td>
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09/2012
Minor Format/Font changes. Pg 1- Document Precedence section added. Pg. 3- Change patients of extreme age younger than 12 yrs, now states younger than 19 years. Pg 5-language added by Dr. Borden - “Propofol for pediatric patients”. Pg 6- references added. Pg 7- Audit Information section added. Medical/Clinical Coder reviewed-RLJ.

06/2014
Effective 9/1/2014. Adoption of language from BCBSA policy #7.02.01. Clarification on ASA-P3 status. Clearer definition of conscious sedation versus monitored anesthesia.

08/2015
No language update. Added CPT 00520 for clarification only, does not require PA. Added CPTs: 00635, 01935 & 01936, 01991 & 01992- requires PA.

08/2016
Updates language per updated BCBSA policy

Eligible Providers

Qualified healthcare professionals practicing within the scope of their license(s), to include:

Anesthesiologist (MD or DO)
Certified Registered Nurse Anesthetist (CRNA)

Approved by BCBSVT Medical Policy Committee:

Date Approved

Joshua Plavin, MD
Senior Medical Director
Chair, Health & Payment Policy Committee

Robert Wheeler MD
Chief Medical Officer
### Attachment I

#### CPT Coding Table & Instructions

The following codes are considered as medically necessary when applicable criteria have been met.

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Number</th>
<th>Description</th>
<th>Policy Instructions</th>
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</thead>
<tbody>
<tr>
<td>CPT</td>
<td>00520</td>
<td>Anesthesia for closed chest procedures; (including bronchoscopy) not otherwise specified</td>
<td>Prior approval is not required for this code.</td>
</tr>
<tr>
<td>CPT</td>
<td>00635</td>
<td>Anesthesia for procedures in lumbar region; diagnostic or therapeutic lumbar puncture</td>
<td>Prior Approval Required</td>
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<tr>
<td>CPT</td>
<td>00740</td>
<td>Anesthesia for upper intestinal endoscopic procedures, endoscope introduced proximal to duodenum</td>
<td>Prior Approval Required</td>
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<tr>
<td>CPT</td>
<td>00810</td>
<td>Anesthesia for lower gastrointestinal endoscopic procedures, endoscope introduced distal to duodenum</td>
<td>Prior Approval Required</td>
</tr>
<tr>
<td>CPT</td>
<td>01935</td>
<td>Anesthesia for percutaneous image guided procedures on the spine and spinal cord; diagnostic</td>
<td>Prior Approval Required</td>
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<td>CPT</td>
<td>01936</td>
<td>Anesthesia for percutaneous image guided procedures on the spine and spinal cord; therapeutic</td>
<td>Prior Approval Required</td>
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<tr>
<td>CPT</td>
<td>01991</td>
<td>Anesthesia for diagnostic or therapeutic nerve blocks and injections (when block or injection is performed by a different physician or other qualified health care professional); other than the prone position</td>
<td>Prior Approval Required</td>
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<tr>
<td>CPT</td>
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<td>Anesthesia for diagnostic or therapeutic nerve blocks and injections (when block or injection is performed by a different physician or other qualified health care professional); prone position</td>
<td>Prior Approval Required</td>
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The following code is considered Informational and is not reimbursable.

| HCPCS | G9654 | Monitored Anesthesia Care (MAC) | 08052016RLG |