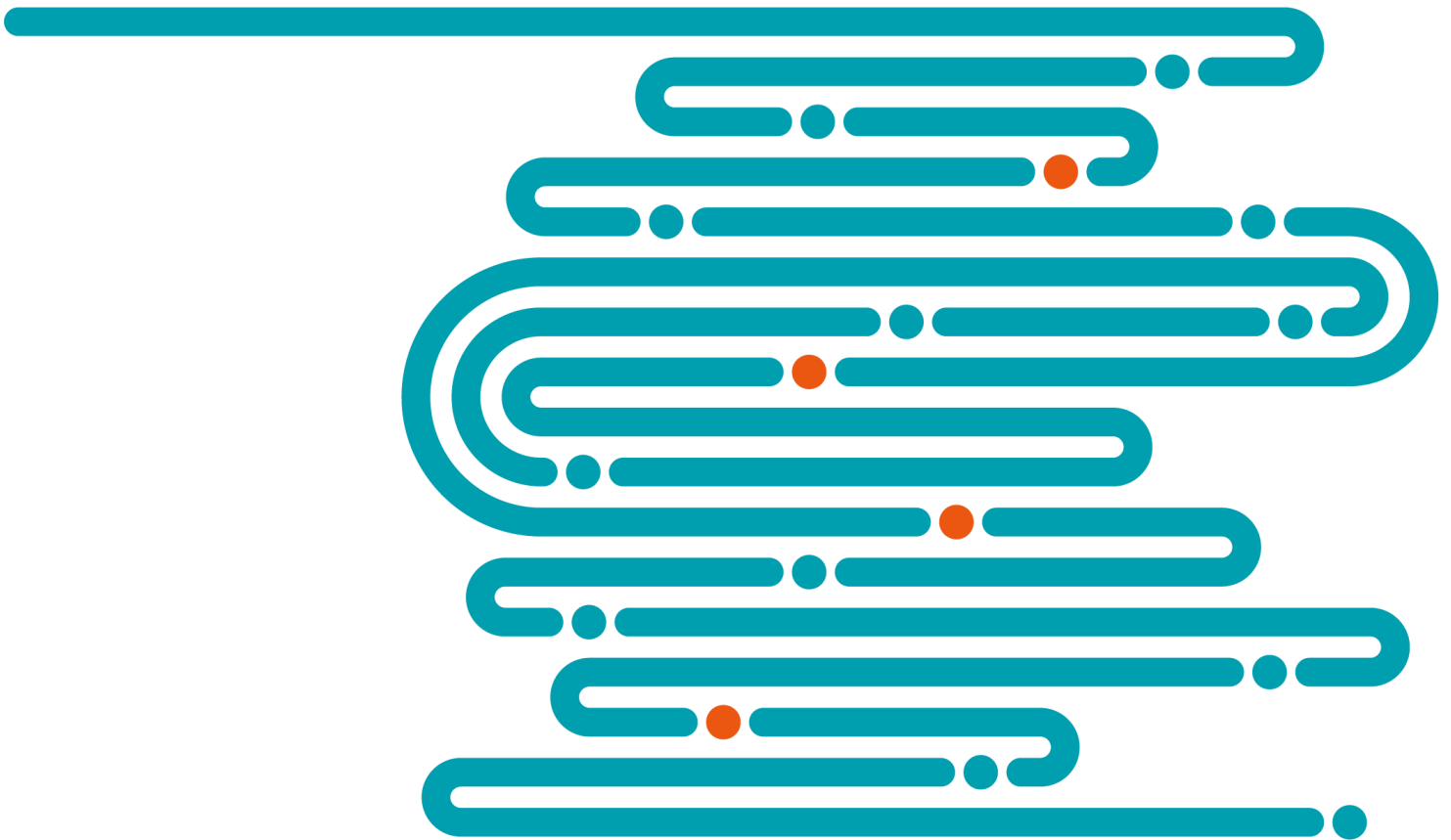


Intravenous moderate sedation Leading practice recommendations (Patients age 18 years and older)



Leading Practice Recommendations for Intravenous Moderate Sedation

This document provides organizations with recommendations for intravenous moderate sedation for patients who do not have a controlled airway. Organizations should use this tool to evaluate their practices, but clinical judgement should always define how patients should be cared for. This document is not intended to replace the clinical judgment of physicians or other licensed professionals caring for patients. This resource is a quality improvement document intended to reduce morbidity and mortality. These materials are for information only, do not constitute medical or legal advice, and are not a substitute for independent professional medical judgment or legal advice. The entire risk as to the accuracy, use, and reliance on these materials is disclaimed by Vizient.

Moderate sedation by non-anesthesiologists is a high-risk and problem-prone procedure. This document is a resource to help organizations assess and improve their moderate sedation processes. It describes the structures and processes that should be in place to promote optimal outcomes. A multidisciplinary team of health care professionals collaborated to define the recommendations.

Moderate Sedation/Analgesia (“conscious sedation” or “MSA”): A drug-induced depression of consciousness during which sedatives or combinations of sedatives and analgesic medications are often used and may be titrated to effect. Moderate and deep sedation or general anesthesia may be achieved via any route of administration. Moderate sedation is characterized by:

- Patients respond purposefully (reflex withdrawal from a painful stimulus is not considered a purposeful response) to verbal commands alone or accompanied by light tactile stimulation
- No interventions are required to maintain a patent airway
- Spontaneous ventilation is adequate
- Cardiovascular function is usually maintained

Reference:

Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. *Anesthesiology* 2018; 128(3):437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019

Phase	Leading practice	Reference
<p>Requirements for licensed independent practitioner (LIP) privileges</p> <p><i>(Exempted physicians: board-certified physicians in emergency medicine, cardiology, critical care medicine, and oral maxillofacial surgery)</i></p> <p>LIP's in the above specialties who have recently completed post-graduate training and are actively pursuing board certification in their respective specialty must fulfill these credentialing criteria if they do not become board certified within two years of completing such training.</p>	<p><i>The following requirements do not apply to anesthesiologists or certified registered nurse anesthetists.</i></p> <p>Licensure, registration and certification:</p> <ul style="list-style-type: none"> Valid Drug Enforcement Agency (DEA) registration number, unrestricted state medical license and current board certification in the LIP's primary specialty is required. <p>Resuscitation Competency:</p> <ul style="list-style-type: none"> Successful completion of both basic life support (BLS) and advanced cardiovascular life support (ACLS) is required. Both qualifications must be continuously maintained throughout the credentialing period. <p>Required Airway Assessment Competency:</p> <ul style="list-style-type: none"> <i>(Exempted physicians are not required to demonstrate competency)</i> Demonstrate the ability to examine the airway, recognize high-risk airways, and perform a Mallampati classification. <p>High-Risk Airway:</p> <ul style="list-style-type: none"> Habitus: Excessive facial hair, receding chin, or significant obesity especially involving the neck and facial structures (body mass index >35) Head and Neck: Short neck, limited neck extension, decreased hyoid-mental distance (<3 cm in an adult), neck mass, cervical spine disease/trauma, tracheal deviation, dysmorphic facial features (e.g., Pierre-Robin syndrome) Mouth: Small opening (<3 cm in an adult); protruding incisors; loose or capped teeth; dental appliances; high, arched palate; macroglossia; tonsillar hypertrophy; nonvisible uvula Jaw: Micrognathia, retrognathia, trismus, or significant malocclusion <p>Required Airway Management Competency evaluation: <i>(Exempted physicians are not required to demonstrate competency)</i></p> <ul style="list-style-type: none"> Experience such as a demonstrated ability to: <ul style="list-style-type: none"> Recognize airway obstruction <ul style="list-style-type: none"> ✓ Decreased, absent, or paradoxical chest movement ✓ Lack of airflow detectable at mouth or nose ✓ "Noisy" respirations (snoring, wheezing, gurgling, crowing) 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. <i>Anesthesiology</i> 2018; 1 28(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p> <p>Comprehensive Accreditation Manual for Hospitals (CAMH): The Official Handbook. Oakbrook Terrace, Ill: Joint Commission on Accreditation of Healthcare Organizations; 2019. PC 03.01.01 element of performance (EP) 10 PC 13.20: EP 2, 6, 10, 12.</p>

Phase	Leading practice	Reference
<p>Requirements for licensed independent practitioner (LIP) privileges <i>(continued)</i></p>	<ul style="list-style-type: none"> • Insert oral and nasal airways • Perform a jaw thrust and chin lift • Use a self-inflating bag-valve-mask device • Operate an oxygen cylinder and flow meter • Operate suction regulator and associated devices <p>Required Pharmacology Competency:</p> <ul style="list-style-type: none"> • All nonexempt LIP's must successfully complete an institutionally-approved sedation pharmacology education module or course with a passing score as approved by the institution's anesthesia chairman that includes: <ul style="list-style-type: none"> – Sedative-analgesic medication options – Patient-appropriate drug selection, dosages, onset of action, time to peak effect, dosing intervals, duration of action, and side effects – Dexmedetomidine mechanism and onset of action – Recognition and treatment of respiratory depression, overdoses, and other agent-specific side effects – Reversal agent (e.g., naloxone and flumazenil) dosages, onset of action, time to peak effect, dosing intervals, duration of action, and side effects <p>Monitoring:</p> <ul style="list-style-type: none"> • Use of and troubleshooting of equipment <ul style="list-style-type: none"> – Cardiac monitor-defibrillator – Oscillometric blood pressure – Capnography – Pulse Oximetry <p>Required Sedation Policy Competency:</p> <ul style="list-style-type: none"> • All LIP's (both exempt and nonexempt) must successfully complete an appropriate education module on the organization's moderate sedation policy with a passing score as approved by the institution's anesthesia chairman. 	
<p>Requirements for registered nurses (RNs) or others permitted to participate by state law and institutional policy</p>	<p>Required Resuscitation Competency:</p> <ul style="list-style-type: none"> • Both BLS and ACLS qualifications are required and must be continuously maintained throughout the credentialing period. <p>Required Airway Assessment Competency:</p> <ul style="list-style-type: none"> • Demonstrate the ability to examine an airway, recognize high-risk airways, and perform a Mallampati classification. <p>High-Risk Airway:</p> <ul style="list-style-type: none"> • Habitus: Excessive facial hair, receding chin, or significant obesity especially involving the neck and facial structures (body mass index >35) 	<p>America Society of Anesthesiologists (2018). Statement on nonoperating room anesthetizing locations. (Approved by the ASA House of Delegates on October 19, 1994, last amended on October 16, 2013, and reaffirmed on October 17, 2018).</p>

Phase	Leading practice	Reference
<p>Requirements for RNs or others permitted to participate by state law and institutional policy <i>(continued)</i> <i>Non-LIPs may not independently administer moderate sedation without an LIP continuously present within the procedure area. If state law and institutional policy allow other health care professionals to administer moderate sedation, they must meet all of the same requirements as RNs.</i></p>	<ul style="list-style-type: none"> • Head and Neck: Short neck, limited neck extension, decreased hyoid-mental distance (<3 cm in an adult), neck mass, cervical spine disease/trauma, tracheal deviation, dysmorphic facial features (e.g., Pierre-Robin syndrome) • Mouth: Small opening (<3 cm in an adult); protruding incisors; loose or capped teeth; dental appliances; high, arched palate; macroglossia; tonsillar hypertrophy; nonvisible uvula • Jaw: Micrognathia, retrognathia, trismus, or significant malocclusion <p>Required Airway Management Competency:</p> <ul style="list-style-type: none"> • Experience such as a demonstrated ability to: <ul style="list-style-type: none"> – Recognize apnea and airway obstruction – Decreased, absent, or paradoxical chest movement – Lack of airflow detectable at mouth or nose – “Noisy” respirations (e.g., snoring, wheezing, gurgling, crowing) • Insert oral and nasal airways • Perform a jaw thrust and chin lift • Use a self-inflating bag-valve-mask device • Operate an oxygen cylinder and flow meter • Operate suction regulator and associated devices <p>Required Pharmacology Competency:</p> <ul style="list-style-type: none"> • All such practitioners must complete an institutionally-approved pharmacology education module or course with a passing score as approved by the anesthesia chairman that includes: <ul style="list-style-type: none"> – Sedative-analgesic medication options – Patient-appropriate drug selection, dosages, onset of action, time to peak effect, dosing intervals, duration of action, and side effects – Dexmedetomidine mechanism and onset of action – Recognition and treatment of respiratory depression, overdoses, and other agent-specific side effects – Reversal agent (e.g., naloxone and flumazenil) dosages, onset of action, time to peak effect, dosing intervals, duration of action, and side effects <p>Monitoring:</p> <ul style="list-style-type: none"> • Use of and troubleshooting of equipment <ul style="list-style-type: none"> – Cardiac monitor-defibrillator – Oscillometric blood pressure – Capnography – Pulse Oximetry 	<p>https://www.asahq.org/standards-and-guidelines/statement-on-nonoperating-room-anesthetizing-locations Accessed April 1, 2019</p> <p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. <i>Anesthesiology</i> 2018; 1 28(3):437-479. doi: 10.1097/ALN.0000000000002043 Accessed April 4, 2019 CAMH; 2019</p> <ul style="list-style-type: none"> • HR.01.01.01 EP 1 CMS CoP • §482.23(b)(5), §482.23(c)(3)

Phase	Leading practice	Reference
	<p>Required Sedation Policy Competency:</p> <ul style="list-style-type: none"> All such practitioners must successfully complete an institutionally-approved education module on the organization's moderate sedation policy with a passing score as approved by the institution's anesthesia chairman. <p>Patient Advocacy Responsibility:</p> <ul style="list-style-type: none"> Nurses and others permitted to participate are empowered to stop the sedation process at any time during the procedure up to and including requesting consultation with a credentialed anesthesia provider. 	
<p>Requirements for trainees</p>	<p>Full moderate sedation LIP privileges may be granted to board-eligible, post-residency fellowship trainees who meet all the above LIP requirements.</p> <p><i>All other non-fellow trainees must have direct, on-site supervision by an LIP with current, active moderate sedation privileges. (Exempted providers: trainees in anesthesiology, emergency medicine, critical care medicine, and oral maxillofacial surgery are not required to demonstrate competency if their training program director has documented that they have comparable knowledge of airway assessment and rescue skills.)</i></p>	
<p>Renewal of moderate sedation privileges for LIPs and advanced practice providers (APP's)</p>	<p>Moderate sedation privileges will be reevaluated at least every 2 years.</p> <p>Renewal of privileges requires:</p> <ul style="list-style-type: none"> Ongoing maintenance of current, active BLS and ACLS qualifications Valid DEA registration number and unrestricted license Completion of at least 10 moderate sedation procedures within the previous 2 years with ongoing yearly sedation education as approved by the institution's anesthesia chairman Ongoing monitoring/evaluation of moderate sedation outcomes and process indicator compliance with institutional moderate sedation policy and current regulatory guidelines at least every 2 years <i>Supervising physicians for advanced practice providers (APP's) must remain continuously privileged throughout the term of the APP's moderate sedation privileges, and APP's must also complete the above 10 sedation procedure volume requirement</i> <i>If an LIP does not meet all requirements for renewal of moderate sedation privileges, the LIP must reapply for</i> 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. Anesthesiology 2018; 128(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p> <ul style="list-style-type: none"> CMS CoP §482.52

Phase	Leading practice	Reference
Renewal of moderate sedation privileges for LIPs and advanced practice providers (APP's) <i>(continued)</i>	<i>such privileges and fully meet current institutional moderate sedation credentialing requirements</i>	
Pre-sedation evaluation	<p>Except for emergent procedures to limit morbidity and mortality, a comprehensive pre-sedation patient evaluation must be performed prior to the procedure to allow time for patient optimization. This focused history and physical must be performed immediately before the start of the procedure to confirm there has been no significant interval changes in the patient's underlying medical condition.</p> <p>The focused history and physical examination includes at a minimum:</p> <ul style="list-style-type: none"> • History (signed, dated and/or updated, and timed before first sedation medication is administered) <ul style="list-style-type: none"> – Medical conditions <ul style="list-style-type: none"> ✓ Cardiovascular e.g., coronary artery disease (CAD), congestive heart failure (CHF), arrhythmias, etc. ✓ Pulmonary e.g., congestive obstructive pulmonary disease (COPD), asthma, recent upper respiratory infection (URI), etc. ✓ Renal e.g., chronic kidney disease (CKD), renal replacement therapy, etc. ✓ Hepatic e.g., hepatitis, portal hypertension, etc. ✓ Endocrine e.g., diabetes, etc. ✓ Central Nervous System e.g., cerebral vascular accident (CVA), seizures, cognitive disabilities, etc. ✓ Sleep apnea signs/symptoms and possible continuous positive airway pressure (CPAP) use – Current medication regimen, especially medication taken within the last 48 hours (including herbal agents, etc.) – Allergies (including foods, herbal agents and/or latex) – Pregnancy status or last menstrual period, where applicable – Tobacco, alcohol, or substance use/abuse – Prior anesthetic, sedation and/or airway issues – Last oral intake, including tube feedings where applicable 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentists, Anesthesiologists, and Society of Interventional Radiology*. <i>Anesthesiology</i> 2018; 128(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p> <p>CAMH</p> <ul style="list-style-type: none"> • RI.01.03.01 EP 1,2 • NPSG.03.05.01 EP 2, 3 • PC.03.01.03 EP 1,4,8,18 • PC.13.20 • CMS CoP §482.51(b)(2) • CMS CoP §482.52(b) (1)

Phase	Leading practice	Reference
<p>Pre-sedation evaluation (continued)</p>	<ul style="list-style-type: none"> - Exposure to infectious diseases and/or need for isolation procedures • Physical exam: <ul style="list-style-type: none"> - Cardiac (regular versus irregular rate, murmurs, etc.) - Pulmonary (rales, wheezing, etc.) - Airway (Mallampati classification, difficult airway stigmata, etc.) <ul style="list-style-type: none"> ▪ Habitus: Excessive facial hair, receding chin, or significant obesity especially involving the neck and facial structures (body mass index > 35) ▪ Head and Neck: Short neck, limited neck extension, decreased hyoid-mental distance (<3 cm in an adult), neck mass, cervical spine disease or trauma, tracheal deviation, dysmorphic facial features (e.g., Pierre-Robin syndrome) ▪ Mouth: Small opening (<3 cm in an adult); edentulous; protruding incisors; loose or capped teeth; dental appliances; high, arched palate; macroglossia; tonsillar hypertrophy; nonvisible uvula ▪ Jaw: Micrognathia, retrognathia, trismus, or significant malocclusion - Examination(s) specific to the scheduled procedure (e.g., anatomic landmarks, ability to lie in required position for the procedure, etc.) where applicable Additional Evaluation: <ul style="list-style-type: none"> • Documentation of an appropriate American Society of Anesthesiologists (ASA) physical status classification • Review of appropriate diagnostic or laboratory data and determination of need for/availability of blood and/or blood products • Interpretation of cardiac rhythm if other than regular rate and rhythm • Patients should be NPO (nothing by mouth) prior to sedation for a duration that is appropriate for the procedure being performed and for the patient population being served -please see Anesthesiology 3 2017, Vol.126, 376-393. doi:10.1097/ALN.0000000000001452, Accessed September 29, 2019 • Ensure there is a responsible adult (for a child less than 18 years of age and not an emancipated minor, this means a parent, legal guardian, or their designee) to accompany, monitor, and observe the post-sedation outpatient for at least 6 hours after discharge. If such a 	

Phase	Leading practice	Reference
Pre-sedation evaluation <i>(continued)</i>	<p>responsible adult is not available, the team must develop alternative arrangements for more prolonged post-sedation clinical monitoring/observation prior to discharge</p> <ul style="list-style-type: none"> • Consent <ul style="list-style-type: none"> – Explain risks, benefits, and alternatives to sedation with the patient and/or legal guardian with appropriate documentation of same 	
Recommended medical specialist consultation	<ul style="list-style-type: none"> • Consultation with an appropriate medical specialist is recommended for patients with: <ul style="list-style-type: none"> – Severe medical comorbidities e.g., NYHA class 4 CHF, O2-dependent lung disease, etc. – Known or suspected sleep apnea – <i>Sleep apnea patients are at significantly increased risk for airway obstruction and rapid oxygen desaturation during sedation, and organizations should seriously consider how such patients are cared for during and after procedures requiring non-anesthesia sedation administration</i> • A consultation with an anesthesiologist should be very strongly considered for: <ul style="list-style-type: none"> – Severe known or suspected sleep apnea – Patients with an ASA physical status of 4 or higher – Patients with a history of airway problems during sedation, analgesia, or general anesthesia – Patients with a history of adverse reaction to sedation, analgesia, or general anesthesia – Patients who demonstrate high risk airway characteristics (e.g., Mallampati class 4) – Morbid or supermorbid obesity <p><i>Life-threatening situations may warrant proceeding without an anesthesiologist; those cases should be retrospectively reviewed for appropriateness in a timely manner.</i></p> 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. <i>Anesthesiology</i> 2018; 128(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p> <p>Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea: A Report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea. <i>Anesthesiology</i> 2006; 104:1081–93. OSA Anesthesiology Accessed September 29, 2019</p>

Phase	Leading practice	Reference
Medication use	<p>Meperidine (Demerol) is not recommended because of the availability of more suitable agents.</p> <p>Recommended Medications:</p> <ul style="list-style-type: none"> • Fentanyl (short-acting opioid) • Midazolam (short-acting benzodiazepine) • Dexmedetomidine has been recommended by some specialty organizations. Closely monitor for hypotension and bradycardia when loading dexmedetomidine, and its slower onset of action may contribute to excess dosing. Providers should have specific education about dexmedetomidine’s pharmacology before its utilization • Other agents may be used that are approved by the institution’s Pharmacy & Therapeutics Committee in consultation with the anesthesia chairman. <i>(Medications not approved by the P&T Committee or other approved institutional body must be approved by the institution’s anesthesia chairman prior to becoming available for moderate sedation use).</i> 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. Anesthesiology 2018; 128(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p>
Intra-procedure monitoring	<ul style="list-style-type: none"> • The patient should be clinically reevaluated to ensure their clinical status is appropriate before beginning sedation administration • Vigilant, continuous, uninterrupted clinical monitoring of the patient during which the nurse, LIP, or other health care provider permitted by state law and institutional policy is in constant attendance and shall have no other responsibilities that would compromise provision of close, focused, one-to-one patient observation. • The following parameters are monitored continuously and recorded every 5 minutes: <ul style="list-style-type: none"> – Level of consciousness or responsiveness – Electrocardiogram (EKG) rate and rhythm – Noninvasive blood pressure (BP) measurement at least every 5 minutes (unless indwelling arterial catheter for continuous beat-to-beat measurement is present) – Respiratory rate – Continuous oxygen saturation monitoring – Continuous end-tidal carbon dioxide (ETCO₂) monitoring 	<p>Joint Commission 2019 Operative and Invasive Procedures PC.03.01.01:EP 6, 8 CMS §482.51(b)(3), §482.52(b)</p> <p>America Society of Anesthesiologists (2018). Statement on nonoperating room anesthetizing locations. (Approved by the ASA House of Delegates on October 19, 1994, last amended on October 16, 2013, and reaffirmed on October 17, 2018). https://www.asahq.org/standards-and-guidelines/statement-on-nonoperating-room-anesthetizing-locations Accessed April 1, 2019</p>

Phase	Leading practice	Reference
<p>Intra-procedure monitoring (continued)</p>	<ul style="list-style-type: none"> ● Resuscitative Equipment Available At The Bedside: <ul style="list-style-type: none"> – Appropriately sized, self-inflating bag-valve-mask (BVM) device capable of administering at least 90% oxygen and delivering positive pressure ventilation – Nasal cannula and nonrebreather face mask – Oxygen – <i>A reliable source of oxygen adequate for the length of the procedure and a back-up supply. Oxygen piped from a central source, meeting applicable codes, is strongly encouraged. The back-up system should include the equivalent of at least a full (~2200 psi) E cylinder</i> – An adequate and reliable source of suction with associated patient attachments/tubing. A suction system meeting operating room standards is strongly encouraged. – Reversal agents must be located in close physical proximity to the procedure area and immediately available/readily accessible for administration as clinically indicated – Adequate monitoring equipment in adherence with the ASA "Standards for Basic Anesthetic Monitoring" (continuous cardiac, blood pressure, continuous pulse oximetry, continuous capnography) – Sufficient electrical outlets to satisfy monitoring equipment and procedure requirements, including clearly labeled outlets connected to an emergency power supply – Adequate illumination of the patient and monitoring equipment should occur where feasible. In addition, a functional, battery-powered illumination device other than a laryngoscope should be immediately available – Sufficient space to accommodate necessary procedure equipment and/or personnel and allow expeditious access to the patient and monitoring equipment – A reliable means of two-way communication to request assistance. Emergency phone numbers should be posted in a highly visible procedure area location – Other equipment as mandated by state law ● Advanced resuscitative equipment that must be immediately available (i.e., able to be mobilized to the bedside in <5 minutes) within the procedure area <ul style="list-style-type: none"> – Institutionally-approved, age-appropriate code cart with advanced airway equipment, defibrillator-pacemaker, and appropriate resuscitation medications 	

Phase	Leading practice	Reference
Intra-procedure monitoring <i>(continued)</i>	<ul style="list-style-type: none"> - Age-appropriate back-up airway device(s) such as a standard sized adult laryngeal mask airway (LMA) - Intubation equipment, including emergency surgical airway capabilities 	
Post-procedure monitoring	<ul style="list-style-type: none"> • The RN, LIP, or other health care provider permitted by state law and institutional policy who is responsible for the patient during the post-sedation recovery period shall not have any assigned duties other than patient recovery. The LIP shall remain readily available within the immediate procedure area to provide ongoing post-procedure medical management and supervision throughout the recovery period until the patient is formally discharged. • At procedure conclusion and immediately upon beginning the post-procedure recovery period, the patient should undergo an immediate post-sedation reevaluation of vital signs, level of consciousness, Aldrete score, and any appropriate procedure-related assessments. • The RN, LIP, or other health care provider as permitted by state law and institutional policy, shall continuously monitor/observe the patient throughout the recovery period and document vital signs measurements and/or clinical observations at least every 15 minutes (or more frequently, if clinically indicated) until the patient has returned to their pre-sedation baseline or meets clinical discharge criteria approved by institutional leadership. <ul style="list-style-type: none"> - Level of consciousness - Continuous oxygen saturation - Continuous ETCO₂ - Blood pressure - Cardiac rhythm, if the patient has significant cardiovascular disease or when arrhythmias are anticipated or detected - Assessment of adequacy of ventilation (spontaneous airway patency, respiratory rate/depth/pattern) - Pain assessment using an institutionally-approved pain scale to monitor for adequate pain control - Post-procedure temperature • Patients must be discharged from the recovery phase of care by a credentialed LIP or upon meeting institutionally-approved clinical discharge criteria. Patients should be expected to meet all such criteria (or shall have returned to their pre-sedation baseline), which may include criteria such as: 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. <i>Anesthesiology</i> 2018; 128(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p> <ul style="list-style-type: none"> • CAMH 2019 PC.03.01.07 (EP) 4 • CMS CoP §482.52(b) • CAMH 2019 PC.03.01.07(EP) 1, 2, 7 • CMS CoP §482.52(b)(3).

Phase	Leading practice	Reference
Post-procedure monitoring <i>(continued)</i>	<ul style="list-style-type: none"> - Level of consciousness: either awake, alert and oriented x 3, drowsy, easily arousable and appropriately responsive to verbal commands, or at baseline level of consciousness (for cognitively/developmentally challenged patients): <ul style="list-style-type: none"> - Recovery of protective airway reflexes - Blood pressure within $\pm 20\%$ of pre-procedure level (unless post-procedure care requires pharmacologic blood pressure reduction or augmentation) - Heart rate within $\pm 20\%$ of pre-procedure level (unless post-procedure care requires pharmacologic heart rate reduction or augmentation) - Clinically comfortable respiratory rate and pattern without signs/symptoms of extremis - Oxygen saturation $\geq 95\%$ or at the patient's pre-procedure baseline • Intravenous access should be maintained throughout the recovery period and only be discontinued immediately before initiation of formal post-procedure discharge processes • The RN or other health care provider recovering the patient as permitted by state law and institutional policy shall notify the LIP if the patient does not return to their clinical baseline or meet discharge criteria within 2 hours post-sedation • All patients who receive reversal agents must be monitored for a minimum of 90 minutes after their administration 	

Phase	Leading practice	Reference
Post-procedure transport of admitted patients	<p>If an admitted patient is transported before meeting institutionally-approved discharge criteria:</p> <ul style="list-style-type: none"> • Patient shall be accompanied by an RN, LIP, or other health care provider permitted by state law and institutional policy with documented competency in moderate sedation patient monitoring • Pulse oximeter and portable automatic blood pressure device with appropriately sized cuff if transported outside of the immediate procedure area • Oxygen tank containing a minimum pressure of 1,000 psi • Oxygen tubing and appropriate patient delivery devices • Appropriately-sized self-inflating bag-valve-mask for supporting positive pressure ventilation • Emergency drug supplies (to include naloxone and flumazenil) as appropriate for the patient • Oral and nasal airways • A portable cardiac monitor shall also be required if the patient develops a change in cardiac rhythm from pre-procedure baseline at any time during the sedation and/or recovery period, or has a history of clinically significant cardiac disease 	
Post-procedure discharge of outpatients	<ul style="list-style-type: none"> • Outpatients must be discharged to the care of a responsible adult who will provide transportation and be responsible for observing the patient for at least 6 hours after discharge. • Outpatients deemed at high risk for undiagnosed sleep apnea using an institutionally-approved sleep apnea screening tool as well as those with severe or significant medical comorbidities should be strongly considered for a more prolonged period of post-sedation recovery observation prior to discharge home. <ul style="list-style-type: none"> – Written discharge instructions given to outpatients must include: <ul style="list-style-type: none"> ▪ Limited activity for 24 hours. A longer period of specific, prohibited activities may be required by the proceduralist to provide proper care of the procedure site/location ▪ No driving, dangerous activities, or ingestion of alcoholic beverages for at least 24 hours post-procedure. Slow progression of diet toward normal as tolerated (i.e., if juice and crackers were tolerated during recovery, they should repeat juice and crackers at home initially, then progress accordingly as tolerated) ▪ Do not conduct any important business transactions or make any important legal decisions for 24 hours 	<p>Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology*. <i>Anesthesiology</i> 2018; 128(3): 437-479. doi: 10.1097/ALN.0000000000002043. Accessed April 4, 2019</p> <ul style="list-style-type: none"> • CAMH; 2019.PC.04.01.05

Phase	Leading practice	Reference
Post-procedure discharge of outpatients <i>(continued)</i>	<ul style="list-style-type: none"> ▪ Instructions about resumption of post-procedure/home medications, diet, activities, and risk of / signs and symptoms of re-sedation ▪ A contact phone number to call for questions/concerns 	
Leadership and quality improvement	<p>The organization shall have a multidisciplinary team chaired by anesthesia that has responsibility to review sedation policies, procedures, provider credentialing, sedation processes/ patient outcomes (Table 1), sedation-related RCA participation, and other institutional sedation-related quality improvement activities.</p> <p>Anesthesia services policies and procedures will undergo periodic re-evaluation that includes analysis of adverse events, medication errors and other quality or safety indicators related not only to anesthesia, but also to the administration of medications in clinical applications that the hospital has determined involve analgesia rather than anesthesia.</p>	2019 manual PC.03.01.01 EP 10 • CMS CoP §482.52

Table 1: Suggested volume, process and outcome metrics

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	T/E
Volume													
Number of non-anesthesiologist moderate sedation cases													
Number of non-anesthesiologist moderate sedation cases audited													
Outcomes indicators related to procedural sedation													
Reversal agents used													
Unplanned transfer to higher level of care													
Cardiac or respiratory arrest													
Rapid Response or Code Team calls													
Urgent anesthesia consultation required during moderate sedation													
Death within 6 hours of moderate sedation													
Process indicators													
Anesthesia consultation criteria present and no anesthesia consult obtained or documented													
Percent of cases with ASA documented													
Percent of cases NPO status confirmed													
Percent of cases Mallampati classification documented													
Percent of cases pre-sedation evaluation completed (§482.52(b) (1))													
Percent of cases sedation consent obtained													
Percent of cases immediate pre-sedation reevaluation													
Percent of cases intra-procedure vital signs documented q5 minutes (PC.03.01.05, EP1)													
Percent of cases immediate post-sedation reevaluation (PC.03.01.07, EP 7)													
Percent of cases post-sedation vital signs documented per policy (PC.03.01.07, EP 2)													
Percent of cases discharge checklist completed (PC.03.01.07, EP 4)													
Percent of cases discharge attestation completed													

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