ADA GUIDELINES
for the Use of Sedation and General Anesthesia by Dentists

Adopted by the ADA House of Delegates, October 2025

I. INTRODUCTION

The administration of local anesthesia, sedation and general anesthesia is an integral part of dental practice. The American Dental Association is committed to the safe and effective use of these modalities by appropriately educated and trained dentists. The purpose of these guidelines is to assist dentists in the delivery of safe and effective sedation and anesthesia.

Dentists must comply with their state laws, rules and/or regulations when providing sedation and anesthesia and will only be subject to Section III. Educational Requirements as required by those state laws, rules and/or regulations. Dental office-based sedation or general anesthesia may be administered by a qualified dentist or another independently qualified anesthesia healthcare provider, in accordance with state laws, rules and/or regulations for the benefit of patient safety.

Level of sedation is entirely independent of the route of administration. Moderate and deep sedation or general anesthesia may be achieved via any route of administration and thus an appropriately consistent level of training must be established.

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For children, the American Dental Association supports the use of the American Academy of Pediatrics/American Academy of Pediatric Dentistry *Guidelines for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures* and the American Dental Association's Council on Dental Education and Licensure's *Guidelines for Teaching Pediatric Pain Control and Sedation to Dentists and Dental Students*. The American Dental Association further recognizes that other disciplines of dentistry may provide sedation/anesthesia care to children in accordance with their respective guidelines, Commission on Dental Accreditation Standards for anesthesia education and training, and state laws, rules and/or regulations.

Because sedation and general anesthesia are 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 diagnose and manage the physiologic consequences (rescue) for patients whose level of sedation becomes deeper than initially intended.[1]

For all levels of sedation, the qualified dentist must have the training, skills, drugs and equipment to identify and manage such an occurrence until either assistance arrives (emergency medical service) or the patient returns to the intended level of sedation without airway or cardiovascular complications.

II. DEFINITIONS

METHODS OF ANXIETY AND PAIN CONTROL

MINIMAL SEDATION (PREVIOUSLY KNOWN AS ANXIOLYSIS) – a minimally depressed level of consciousness, produced by a pharmacological method, that retains the patient's *normal response to verbal command*.[1]

They will also retain the ability to independently and continuously maintain an airway. Although cognitive function and coordination may be modestly impaired, ventilatory and cardiovascular functions are unaffected.

The following definitions apply to administration of minimal sedation:

maximum recommended dose (MRD) – maximum FDA-recommended dose of a drug, as printed in FDA-approved labeling for unmonitored home use.

dosing for minimal sedation via the enteral route – minimal sedation may be achieved by the administration of a drug, either singly or in divided doses, by the enteral route to achieve the desired clinical effect, not to exceed the maximum recommended dose (MRD).

Nitrous oxide/oxygen when used in combination with sedative agent(s) may produce minimal, moderate, deep sedation or general anesthesia.

The administration of an enteral drug exceeding the maximum recommended dose for unmonitored home use during a single appointment is considered to be moderate sedation and the moderate sedation guidelines apply.

Note: In accord with this particular definition, the drug(s) and/or techniques used should carry a margin of safety wide enough never to render unintended loss of consciousness. The use of the MRD to guide dosing for minimal sedation is intended to create this margin of safety.

MODERATE SEDATION – 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.[1]

Note: In accord with this particular definition, the drugs and/or techniques used should carry a margin of safety wide enough to render unintended loss of consciousness unlikely. Repeated dosing of an agent before the effects of previous dosing can be fully appreciated may result in a greater alteration of the state of consciousness than is the intent of the dentist. Further, a patient whose only response is reflex withdrawal from a painful stimulus is not considered to be in a state of moderate sedation.

The following definition applies to the administration of moderate or deeper levels of sedation:

titration – administration of incremental doses of an intravenous or inhalation drug until a desired effect is reached. Knowledge of each drug's time of onset, peak response and duration of action is essential to avoid over sedation. Although the concept of titration of a drug to effect is critical for patient safety, when the intent is moderate sedation one must know whether the previous dose has taken full effect before administering an additional drug increment.

DEEP SEDATION AND GENERAL ANESTHESIA

deep sedation – 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.[1]

general anesthesia – a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory 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.

ROUTES OF ADMINISTRATION

enteral – any technique of administration in which the agent is absorbed through the gastrointestinal (GI) tract or oral mucosa [i.e., oral, rectal, sublingual].

parenteral – a technique of administration in which the drug bypasses the gastrointestinal (GI) tract [i.e., intramuscular (IM), intravenous (IV), intranasal (IN), submucosal (SM), subcutaneous (SC), intraosseous (IO)].

transdermal – a technique of administration in which the drug is administered by patch or iontophoresis through skin.

transmucosal – a technique of administration in which the drug is administered across mucosa such as intranasal, sublingual, or rectal.

inhalation – a technique of administration in which a gaseous or volatile agent is introduced into the lungs and whose primary effect is due to absorption through the gas/blood interface.

TERMS

analgesia – the diminution or elimination of pain.

local anesthesia – the elimination of sensation, especially pain, in one part of the body by the topical application or regional injection of a drug.

Note: Although the use of local anesthetics is the foundation of pain control in dentistry and has a long record of safety, dentists must be aware of the maximum, safe dosage limits for each patient. Large doses of local anesthetics in themselves may result in central nervous system depression, especially in combination with sedative agents.

qualified dentist – a dentist providing sedation and anesthesia in compliance with their state rules and/or regulations.

operating dentist – dentist with primary responsibility for providing operative dental care while a qualified dentist or independently practicing qualified anesthesia healthcare provider administers minimal, moderate or deep sedation or general anesthesia.

competent – while performing independently, displaying special skill or knowledge derived from training and experience.

must/shall – indicates an imperative need and/or duty; an essential or indispensable item; mandatory.

should – indicates the recommended manner to obtain the standard; highly desirable.

may – indicates freedom or liberty to follow a reasonable alternative.

continual – repeated regularly and frequently in a steady succession.

continuous – prolonged without any interruption at any time.

time-oriented anesthesia record – documentation at appropriate time intervals of drugs, dosesand physiologic data obtained during patient monitoring.

immediately available – on site in the facility and available for immediate use.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS (ASA) PATIENT PHYSICAL STATUS CLASSIFICATION[2]

ASA PS Classification	Definition	Adult examples, including, but not limited to:
ASA I	A normal healthy patient	Healthy, non-smoking, no or minimal alcohol use
ASA II	A patient with mild systemic disease	Mild diseases only without substantive functional limitations. Current smoker, social alcohol drinker, pregnancy, obesity (30 < BMI < 40), well-controlled DM/HTN, mild lung disease
ASA III	A patient with severe systemic disease	Substantive functional limitations; One or more moderate to severe diseases. Poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, **ESRD undergoing regularly scheduled dialysis, premature infant PCA < 60 weeks, history (>3 months) of MI, CVA, TIA, or CAD/stents.
ASA IV	A patient with severe systemic disease that is a constant threat to life	Recent (< 3 months) MI, CVA, TIA, or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARD or **ESRD not undergoing regularly scheduled dialysis
ASA V	A moribund patient who is not expected to survive without the operation	Ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction
ASA VI	A declared brain-dead patient whose organs are being removed for donor purposes	

**The addition of "E" denotes Emergency surgery. (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).

AMERICAN SOCIETY OF ANESTHESIOLOGISTS FASTING RECOMMENDATIONS*[3]

Ingested Material	Minimum Fasting Period†
Clear liquids‡	2 hours
Breast milk	4 hours
Infant formula	6 hours
Nonhuman milk§	6 hours
Light meal**	6 hours
Fried foods, fatty meal, or meat	Additional fasting time (e.g. 8 or more hours) may be needed

Modifications to the above should be considered for patients with physiologic conditions or taking medications that delay gastric emptying (i.e., GLP-1 agonists).

*These recommendations apply to healthy patients who are undergoing elective procedures. They are not intended for women in labor. Following the guidelines does not guarantee complete gastric emptying.

†The fasting periods noted above apply to all ages.

‡Examples of clear liquids include water, fruit juices without pulp, carbonated beverages, clear tea, and black coffee.

§Since nonhuman milk is similar to solids in gastric emptying time, the amount ingested must be considered when determining an appropriate fasting period.

**A light meal typically consists of toast and clear liquids. Meals that include fried or fatty foods or meat may prolong gastric emptying time. Additional fasting time (e.g., 8 or more hours) may be needed in these cases. Both the amount and type of foods ingested must be considered when determining an appropriate fasting period.

III. EDUCATIONAL REQUIREMENTS

A. Minimal Sedation

1. To administer minimal sedation, the dentist must be competent, as demonstrated by successful completion of:
   a. training in minimal sedation consistent with that prescribed in the *ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students*,

      or

   b. comprehensive training in moderate sedation that satisfies the requirements described in the Moderate Sedation section of the *ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students* at the time training was commenced,

      or

   c. an advanced education program accredited by the Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage minimal sedation commensurate with these guidelines;

      and

   d. a current certification in Basic Life Support.

2. Administration of minimal sedation by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and their clinical staff to maintain current certification in Basic Life Support.

B. Moderate Sedation

1. To administer moderate sedation, the dentist must be competent, as demonstrated by successful completion of:
   a. a comprehensive training program in moderate sedation that satisfies the requirements described in the Moderate Sedation section of the *ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students* at the time training was commenced,

      or

   b. an advanced education program accredited by the Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage moderate sedation commensurate with these guidelines;

      and

   c. 1) A current certification in Basic Life Support and
      2) Current certification in Advanced Cardiac Life Support (ACLS). Current certification in Pediatric Advanced Life Support (PALS) is required for treating age-appropriate patients.

2. Administration of moderate sedation by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and their clinical staff to maintain current certification in Basic Life Support.

C. Deep Sedation or General Anesthesia

1. To administer deep sedation or general anesthesia, the dentist must be competent, as demonstrated by successful completion of:
   a. An advanced education program accredited by the Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage deep sedation or general anesthesia, commensurate with Part IV.C of these guidelines;

      and

   b. 1) A current certification in Basic Life Support and

      2) Current certification in Advanced Cardiac Life Support (ACLS). Current certification in Pediatric Advanced Life Support (PALS) is required for treating age-appropriate patients.
2. Administration of deep sedation or general anesthesia by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and their clinical staff to maintain current certification in Basic Life Support (BLS).

IV. CLINICAL GUIDELINES

A. Minimal sedation

1. Patient History and Evaluation

   Patients considered for minimal sedation must be suitably evaluated prior to the start of any sedative procedure. In healthy or medically stable individuals (ASA I, II) this should consist of a review of their current medical history and medication use. In addition, patients with significant medical considerations (ASA III, IV) may require consultation with their primary care physician or consulting medical specialist.

2. Pre-Operative Evaluation and Preparation

   - The patient, parent, legal guardian and/or caregiver must be advised regarding the procedure associated with the delivery of any sedative agents and informed consent for the proposed sedation must be obtained.
   - Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
   - An appropriate focused physical evaluation should be performed.
   - Baseline vital signs including body weight, height, BMI, blood pressure, pulse rate, and respiration rate must be obtained unless invalidated by the nature of the patient, procedure or equipment. Body temperature should be measured when clinically indicated.
   - Preoperative dietary restrictions must be considered based on the sedative technique prescribed.
   - Pre-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian and/or caregiver.

3. Personnel and Equipment Requirements

   Personnel: At least one additional person trained in Basic Life Support must be present in addition to the dentist.

   Equipment:
   - A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available. At minimum, the following must be available: bag-valve-mask with multiple mask sizes, portable oxygen tank with regulator and key, and oral pharyngeal airways.
   - Documentation of compliance with manufacturers' recommended maintenance of monitors, anesthesia delivery systems, and other anesthesia-related equipment should be maintained. A pre-procedural check of equipment for each administration of sedation must be performed.
   - When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.
   - An appropriate scavenging system must be available if gases other than oxygen or air are used.

4. Monitoring and Documentation

   Monitoring: A qualified dentist, or at the dentist's direction, an appropriately trained individual, must remain in the operatory during active dental treatment to monitor the patient continuously until the patient meets the criteria for discharge to the recovery area. The appropriately trained individual must be familiar with monitoring techniques and equipment. Monitoring must include:

   Consciousness: Level of sedation (e.g., responsiveness to verbal commands) must be continually assessed.

   Oxygenation: Oxygen saturation by pulse oximetry.

   Ventilation:

   - The qualified dentist and/or appropriately trained individual must observe chest excursions.
   - The qualified dentist and/or appropriately trained individual must verify respirations.

   Circulation: Blood pressure and heart rate should be evaluated pre-operatively, post-operatively and intraoperatively as necessary (unless the patient is unable to tolerate such monitoring).

   Documentation: An appropriate sedative record must be maintained, including the names of all drugs administered, time administered and route of administration, including local anesthetics, dosages, and monitored physiological parameters.

5. Recovery and Discharge
   - Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.
   - The qualified dentist or appropriately trained clinical staff must monitor the patient during recovery until the patient is ready for discharge by the dentist.
   - The qualified dentist must determine and document that level of consciousness, oxygenation, ventilation and circulation are satisfactory prior to discharge.
   - Post-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian or caregiver.
6. Emergency Management
   - If a patient enters a deeper level of sedation than the dentist is qualified to provide, the dentist must stop the dental procedure until the patient returns to the intended level of sedation.
   - The qualified dentist is responsible for the sedative management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of minimal sedation and providing the equipment and protocols for patient rescue.
   - All providers and offices must have written emergency protocols.
   - Documented training sessions, including rehearsed emergency drills, must be developed and rehearsed, at minimum, every six months. It is the responsibility of the qualified dentist to ensure training occurs as presented.

B. Moderate Sedation

1. Patient History and Evaluation

   Patients considered for moderate sedation must undergo an evaluation prior to the administration of any sedative. This should consist of at least a review at an appropriate time of their medical history and medication use and NPO (nothing by mouth) status. In addition, patients with significant medical considerations (e.g., ASA III, IV) should also require consultation with their primary care physician or consulting medical specialist. Assessment of Body Mass Index (BMI)[4] should be considered part of a pre-procedural workup. Patients with elevated BMI may be at increased risk for airway associated morbidity, particularly if in association with other factors such as obstructive sleep apnea.

2. Pre-operative Evaluation and Preparation

   - The patient, parent, legal guardian and/or caregiver must be advised regarding the procedure associated with the delivery of any sedative agents and informed consent for the proposed sedation must be obtained.
   - Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
   - An appropriate focused physical evaluation must be performed.
   - Baseline vital signs including body weight, height, BMI, blood pressure, pulse rate, respiration rate, and blood oxygen saturation by pulse oximetry must be obtained unless precluded by the nature of the patient, procedure or equipment. Body temperature should be measured when clinically indicated.
   - Pre-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian or caregiver, including pre-operative fasting instructions based on the ASA Summary of Fasting and Pharmacologic Recommendations.[3]

3. Personnel and Equipment Requirements

   Personnel: At least one additional person trained in Basic Life Support must be present in addition to the dentist.

   Equipment:

   - A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available. At minimum, the following must be available: bag-valve-mask with multiple mask sizes, portable oxygen tank with regulator and key, oral pharyngeal airways, and supraglottic airways.
   - Documentation of compliance with manufacturers' recommended maintenance of monitors, anesthesia delivery systems, and other anesthesia-related equipment should be maintained. A pre-procedural check of equipment for each administration of sedation must be performed.
   - When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.

- The equipment necessary for monitoring end-tidal CO_2 and auscultation of breath sounds must be immediately available.
- An appropriate scavenging system must be available if gases other than oxygen or air are used.
- The equipment necessary to establish intravascular or intraosseous access should be available until the patient meets discharge criteria.
- The patient should be on supplemental oxygen throughout the procedure, as determined by the treating dentist, unless precluded by the nature of the patient, procedure (e.g., fire risk), or equipment.

4. Monitoring and Documentation

Monitoring: A qualified dentist administering moderate sedation must remain in the operatory room to monitor the patient continuously until the patient meets the criteria for recovery. When active treatment concludes and the patient recovers to a minimally sedated level a qualified allied team member may be directed by the dentist to remain with the patient and continue to monitor them as explained in the guidelines until they are discharged from the facility. The dentist must not leave the facility until the patient meets the criteria for discharge and is discharged from the facility. Monitoring must include:

Consciousness: Level of sedation (e.g., responsiveness to verbal command) must be continually assessed.

Oxygenation: Oxygen saturation must be evaluated by pulse oximetry continuously.

Ventilation:

- The dentist must observe chest excursions continually.
- The dentist must monitor ventilation and/or breathing by monitoring end-tidal CO_2 unless precluded or invalidated by the nature of the patient, procedure or equipment. In addition, ventilation should be monitored by continual observation of qualitative signs, including auscultation of breath sounds with a precordial or pretracheal stethoscope.
- Respiratory rate must be continually monitored and evaluated.

Circulation:

- The dentist must continually evaluate blood pressure and heart rate unless invalidated by the nature of the patient, procedure or equipment and this is noted in the time-oriented anesthesia record.
- Continuous ECG monitoring unless precluded or invalidated by the nature of the patient, procedure (e.g. fire risk), or equipment.

Documentation:

- Appropriate time-oriented anesthetic record must be maintained, including the names of all drugs, dosages (in weight, i.e., mg or mcg) and their administration times, including local anesthetics, dosages and monitored physiological parameters.
- Pulse oximetry, heart rate, respiratory rate, blood pressure and level of consciousness must be recorded continually.

5. Recovery and Discharge

- Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.

MODERATE SEDATION CONTINUED

- The qualified dentist or appropriately trained clinical staff must continually monitor the patient's blood pressure, heart rate, oxygenation and level of consciousness.
- The qualified dentist must determine and document that level of consciousness; oxygenation, ventilation and circulation are satisfactory for discharge.
- Post-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian and/or caregiver.
- If a pharmacological reversal agent is administered before discharge criteria have been met, the patient must be monitored for a longer period than usual before discharge, since re-sedation may occur once the effects of the reversal agent have waned.

6. Emergency Management
   - If a patient enters a deeper level of sedation than the dentist is qualified to provide, the dentist must stop the dental procedure until the patient returns to the intended level of sedation.
   - The qualified dentist is responsible for the sedative management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of moderate sedation and providing the equipment, drugs and protocol for patient rescue.
   - All providers and offices must have written emergency protocols.
   - Documented training sessions, including rehearsed emergency drills, must be developed and rehearsed, at minimum, every six months. It is the responsibility of the qualified dentist to ensure training occurs as presented.

C. Deep Sedation or General Anesthesia

1. Patient History and Evaluation

   Patients considered for deep sedation or general anesthesia must undergo an evaluation prior to the administration of any sedative. This must consist of at least a review of their medical history and medication use and NPO (nothing by mouth) status. In addition, patients with significant medical considerations (e.g., ASA III, IV) must have consultation with their primary care physician or consulting medical specialist. Assessment of Body Mass Index (BMI)[4] should be considered part of a pre-procedural workup. Patients with elevated BMI may be at increased risk for airway associated morbidity, particularly if in association with other factors such as obstructive sleep apnea.

2. Pre-operative Evaluation and Preparation
   - The patient, parent, legal guardian and/or caregiver must be advised regarding the procedure associated with the delivery of any sedative or anesthetic agents and informed consent for the proposed sedation/anesthesia must be obtained.
   - Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
   - An appropriate focused physical evaluation must be performed.

- Baseline vital signs including body weight, height, BMI, blood pressure, pulse rate, respiration rate, and blood oxygen saturation by pulse oximetry must be obtained unless invalidated by the patient, procedure or equipment. In addition, body temperature should be measured when clinically appropriate.
- Pre-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian and/or caregiver, including pre-operative fasting instructions based on the ASA Summary of Fasting and Pharmacologic Recommendations.[3]
- An intravenous (IV) line should be established and secured for the duration of the procedure, as needed.
  - In certain cases, deep sedation or general anesthesia may be administered without first establishing an indwelling intravenous line. These exceptions may apply to very short procedures or situations where intravenous access is delayed until after sedation or anesthesia is initiated, such as with uncooperative patients.

3. Personnel and Equipment Requirements

Personnel: A minimum of three (3) individuals must be present.

- A dentist qualified in accordance with part III. C. of these *Guidelines* to administer the deep sedation or general anesthesia.
- Two additional individuals who have current certification in Basic Life Support (BLS).
- When the same individual administering the deep sedation or general anesthesia is performing the dental procedure, one of the additional appropriately trained team members must be designated for patient monitoring.

Equipment:

- A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available. At minimum, the following must be available: bag-valve-mask with multiple mask sizes, portable oxygen tank with regulator and key, oral pharyngeal airways, and supraglottic airways.
- Documentation of compliance with manufacturers' recommended maintenance of monitors, anesthesia delivery systems, and other anesthesia-related equipment should be maintained. A pre-procedural check of equipment for each administration must be performed.
- When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.
- An appropriate scavenging system must be available if gases other than oxygen or air are used.
- The equipment necessary to establish intravenous access must be available.
- Equipment and drugs necessary to provide advanced airway management, and advanced cardiac life support must be immediately available.
- The equipment necessary for monitoring end-tidal CO_2 and auscultation of breath sounds must be immediately available.
- Resuscitation medications and an appropriate defibrillator must be immediately available.
- The patient must be on supplemental oxygen throughout the procedure, as determined by the treating dentist, unless precluded by the nature of the patient, procedure (e.g., fire risk), or equipment.

4. Monitoring and Documentation

Monitoring: A qualified dentist administering deep sedation or general anesthesia must remain in the operatory room to monitor the patient continuously until the patient meets the criteria for recovery. The dentist must not leave the facility until the patient meets the criteria for discharge and is discharged from the facility. Monitoring must include:

Oxygenation: Oxygenation saturation must be evaluated continuously by pulse oximetry.

Ventilation:

- Intubated patient: End-tidal CO2 must be continuously monitored and evaluated.
- Non-intubated patient: End-tidal CO2 must be continually monitored and evaluated unless precluded or invalidated by the nature of the patient, procedure, or equipment. In addition, ventilation should be monitored and evaluated by continual observation of qualitative signs, including auscultation of breath sounds with a precordial or pretracheal stethoscope.
- Respiratory rate must be continually monitored and evaluated.

Circulation:

- The dentist must continuously evaluate heart rate and rhythm via ECG throughout the procedure, as well as pulse rate via pulse oximetry.
- The dentist must continually evaluate blood pressure.

Temperature:

- A device capable of measuring body temperature must be readily available during the administration of deep sedation or general anesthesia.
- The equipment to continuously monitor body temperature should be available and must be performed whenever triggering agents associated with malignant hyperthermia are administered.

Documentation:

- Appropriate time-oriented anesthetic record must be maintained, including the names of all drugs, dosages (in weight, i.e., mg or mcg) and their administration times, including local anesthetics and monitored physiological parameters.
- Pulse oximetry and end-tidal CO2 measurements (if taken), heart rate, respiratory rate and blood pressure must be recorded continually.

5. Recovery and Discharge

- Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.
- The dentist or clinical staff must continually monitor the patient's blood pressure, heart rate, oxygenation and level of consciousness.
- The dentist must determine and document that level of consciousness, oxygenation, ventilation and circulation are satisfactory for discharge.
- Post-operative verbal and written instructions must be given to the patient, and parent, escort, guardian or caregiver.

6. Patients with Special Healthcare Needs

   Because many dental patients undergoing deep sedation or general anesthesia have mental and/or physical special healthcare needs, it is not always possible to have a comprehensive physical examination or appropriate laboratory tests prior to administering care. When these situations occur, the dentist responsible for administering the deep sedation or general anesthesia should document the reasons preventing the recommended preoperative management.

7. Emergency Management

   - The qualified dentist is responsible for sedative/anesthetic management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of deep sedation or general anesthesia and providing the equipment, drugs and protocols for patient rescue.
   - All providers and offices must have written emergency protocols.
   - Documented training sessions, including rehearsed emergency drills, must be developed and rehearsed, at minimum, every six months. It is the responsibility of the qualified dentist to ensure training occurs as presented.

ENDNOTES

1 Excerpted from *Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/ Analgesia*, 2024, of the American Society of Anesthesiologists. A copy of the full text can be obtained from ASA, 1061 American Lane Schaumburg, IL 60173-4973 or online at **www.asahq.org**.

2 Excerpted from *Standards and Practice Parameters: Statement on ASA Physical Status Classification System*, 2020, of the American Society of Anesthesiologists. A copy of the full text can be obtained from ASA, 1061 American Lane Schaumburg, IL 60173-4973 or online at **www.asahq.org**.

3 Excerpted from American Society of Anesthesiologists: Practice Guidelines for preoperative fasting and the use of pharmacologic agents to reduce the risk of pulmonary aspiration: application to healthy patients undergoing elective procedures. *Anesthesiology*, 2017. A copy of the full text can be obtained from ASA, 1061 American Lane Schaumburg, IL 60173-4973 or online at **www.asahq.org**.

4 Standardized BMI category definitions can be obtained from the Centers for Disease Control and Prevention or the American Society of Anesthesiologists.