

## Chapter DE 11

### ANESTHESIA

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**DE 11.01 Authority and purpose.** The rules in this chapter are adopted under authority in ss. 15.08 (5) (b), 227.11 (2) (a) and 447.02 (2) (b), Stats., for the purpose of defining standards for the administration of anesthesia by dentists. The standards specified in this chapter shall apply equally to general anesthesia and sedation, regardless of the route of administration.

**History:** Cr. Register, August, 1985, No. 356, eff. 9-1-85; am. Register, October, 1988, No. 394, eff. 11-1-88; am. Register, August, 1991, No. 428, eff. 9-1-91.

**DE 11.02 Definitions.** In this chapter,

**(1g)** “ASA” means American Society of Anesthesiologists.

**(1s)** “Class I permit” means a sedation permit issued prior to September 1, 2020. This permit is no longer valid.

**(1t)** “Class II permit - enteral” means a sedation permit enabling a dentist to administer, by enteral route, moderate sedation.

**(1tm)** “Class II permit – parenteral” means a sedation permit enabling a dentist to administer, by parenteral route, moderate sedation.

**(1u)** “Class III permit” means a sedation permit enabling a dentist to administer moderate or deep sedation, or general anesthesia.

**(2g)** “Continual” means repeated regularly and frequently in a steady succession.

**(2r)** “Continuous” means prolonged without any interruption at any time.

**(3)** “Deep sedation” means a drug-induced depression of consciousness during which a patient cannot be easily aroused but responds purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. A patient may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

**(3m)** “Enteral” means administration by which the agent is absorbed through the gastrointestinal tract or through oral, rectal, or sublingual mucosa.

**(4)** “General anesthesia” means drug-induced loss of consciousness during which a patient is not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. A patient often requires 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.

**(4e)** “Immediately available” means physically located in the dental office or facility and ready for immediate use or response.

**(4m)** “Minimal sedation” means a minimally depressed level of consciousness, produced by a pharmacological method that retains the patient’s ability to independently and continuously

maintain an airway and respond normally to tactile stimulation and verbal command. Although cognitive function and coordination may be modestly impaired, ventilatory and cardiovascular functions are unaffected.

**(4s)** “Moderate sedation” means 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. If more than one enteral drug is administered or if an enteral drug is administered at a dosage that exceeds the maximum recommended dose during a single appointment, such administration is considered moderate sedation.

**(6)** “Nitrous oxide” means a combination of nitrous oxide and oxygen.

**(6g)** “Parenteral” means administration by which the drug bypasses the gastrointestinal tract through intramuscular, intravenous, intranasal, submucosal, subcutaneous, or intraosseous methods.

**(6r)** “Pediatric patient” means a patient who is 12 years old and under.

**(10)** “Time-oriented anesthesia record” means documentation at appropriate intervals of drugs, doses and physiologic data obtained during patient monitoring.

**History:** Cr. Register, August, 1985, No. 356, eff. 9-1-85; r. and recr. Register, October, 1988, No. 394, eff. 11-1-88; r. (4), renum. (1) to (3) to be (2) to (4) and am., cr. (1) and (5), Register, August, 1991, No. 428, eff. 9-1-91; CR 04-095: am. (1) to (4), cr. (1m) and (6) to (10), r. (5) Register August 2006 No. 608, eff. 1-1-07; CR 13-061: cr. (1s) to (1u) Register June 2014 No. 702, eff. 7-1-14; CR 19-132: r. (1), cr. (1g), r. (1m), am. (1s), (1t), cr. (1tm), am. (1u), r. (2), cr. (2g), (2r), am. (3), cr. (3m), am. (4), cr. (4e), (4m), (4s), am. (6), cr. (6g), (6r), r. (7) to (9) Register August 2020 No. 776, eff. 9-1-20; correction in (3) made under s. 35.17, Stats., Register August 2020 No. 776; CR 22-055: am. (3m), (6g) Register June 2023 No. 810, eff. 7-1-23.

**DE 11.025 Permit to administer anesthesia. (1)** Minimal sedation does not require a permit.

**(2)** The board may issue an anesthesia permit at the following levels:

(a) Class II – enteral is for the administration of moderate sedation by enteral route.

(b) Class II – parenteral is for the administration of moderate sedation by either enteral or parenteral route,

(c) Class III is for the administration of moderate or deep sedation, or general anesthesia.

**(3)** A dentist may apply to the board for an anesthesia permit by submitting all of the following:

(a) Application and fee.

(b) Verification of any permit or credential authorizing anesthesia or sedation held by the dentist.

(c) Disclosure of any previous anesthesia or sedation-related incident, morbidity, or mortality or any board investigation or discipline relating to the delivery of anesthesia or sedation.

(d) Evidence of current licensure to practice dentistry in the state of Wisconsin.

(e) Evidence of current certification in Advanced Cardiovascular Life Support or Pediatric Advanced Life Support through a course that is certified by the American Heart Association. Pediatric Advanced Life Support is required if treating pediatric patients and is a sufficient certification by itself if the licensee is treating both pediatric and adult patients.

(f) Affidavit indicating the dentist has the required equipment and medications.

(g) If applying for a class II permit - enteral, evidence of one of the following:

1. Current board certification or a candidate for board certification by the American Board of Oral and Maxillofacial Surgery.
2. Completion of an accredited oral and maxillofacial surgery residency.
3. Diplomate or candidate of the American Dental Board of Anesthesiology.
4. Successful completion of a board approved education program that provides comprehensive training meeting the requirements in s. DE 11.035.

(h) If applying for a class II permit- parenteral, evidence of one of the following:

1. Current board certification or a candidate for board certification by the American Board of Oral and Maxillofacial Surgery.
2. Completion of an accredited oral and maxillofacial surgery residency.
3. Diplomate or candidate of the American Dental Board of Anesthesiology.
4. Successful completion of a board approved education program that provides comprehensive training meeting the requirements in s. DE 11.035.

(i) If applying for a class III permit, evidence of one of the following:

1. Current board certification or a candidate for board certification by the American Board of Oral and Maxillofacial Surgery.
2. Completion of an accredited oral and maxillofacial surgery residency.
3. Diplomate or candidate of the American Dental Board of Anesthesiology.
4. Completion of a postdoctoral residency in an accredited dental program in dental anesthesiology.

(j) Notwithstanding par. (g) or (h), a dentist holding a class I permit on August 31, 2020, shall be granted a class II permit - enteral upon evidence of 20 cases within the last 5 years of providing moderate sedation.

**Note:** As of September 1, 2020, a class I permit is no longer valid and moderate sedation requires either a class II permit - enteral or class II permit - parenteral.

(k) Notwithstanding par. (h), a dentist holding a class II permit on August 31, 2020, shall be granted a class II permit - parenteral.

**(4)** A dentist may not administer anesthesia or sedation without a permit at the appropriate level of anesthesia or sedation.

**History:** CR 13-061: cr. Register June 2014 No. 702, eff. 7-1-14; CR 19-132: r. and recr. Register August 2020 No. 776, eff. 9-1-20; correction in (2) (a) to (c), (3) (c), (g) (intro.), (h) (intro.), (i) (intro.), (j), (k) made under s. 35.17, Stats., and correction in (3) (j), (k) made under s. 13.92 (4) (b) 14., Stats., Register August 2020 No. 776; CR 21-086: am. (3) (i) 4. Register June 2023 No. 810, eff. 7-1-23; EmR2216: emerg. am. (1) (e), eff. 11-28-22; CR 22-086: am. (1) (e) Register October 2023 No. 814, eff. 11-1-23; CR 23-041: am. (3) (e) Register April 2024 No. 820, eff. 5-1-24.

**DE 11.03 Requirements for nitrous oxide in combination with sedative agent.** Nitrous oxide when used in combination with sedative agent may produce minimal, moderate or deep sedation. During the administration of moderate or nitrous-oxide oxygen sedation, if a patient enters a deeper level of sedation than the dentist is authorized by permit to provide, then the dentist shall stop the sedation and dental procedures until the patient returns to the intended level of sedation.

**History:** CR 04-095: cr. Register August 2006 No. 608, eff. 1-1-07; CR 15-056: am. (1) Register February 2016 No. 722, eff. 3-1-16; CR 19-132: r. and recr. Register August 2020 No. 776, eff. 9-1-20.

**DE 11.035 Board approved education program content.** **(1)** A board approved education program that provides comprehensive training for a class II permit - enteral shall consist of a minimum of 18 hours in administration and management of moderate sedation, including all of the following course content:

- (a) Historical, philosophical and psychological aspects of anxiety and pain control.
- (b) Patient evaluation and selection through review of medical history taking, physical diagnosis and psychological profiling.
- (c) Use of patient history and examination for ASA classification, risk assessment and pre-procedure fasting instruction.
- (d) Definitions and descriptions of physiological and psychological aspects of anxiety and pain.
- (e) Description of the sedation anesthesia continuum, with special emphasis on the distinction between the conscious and the unconscious state.
- (f) Review of adult respiratory and circulatory physiology and related anatomy.
- (g) Pharmacology of local anesthetics and agents used in moderate sedation, including drug interactions and contraindications.
- (h) Indications and contraindications for use of moderate sedation.
- (i) Review of dental procedures possible under moderate sedation.
- (j) Patient monitoring using observation, monitoring equipment, with particular attention to vital signs, ventilation, breathing and reflexes related to consciousness.
- (k) Maintaining proper records with accurate chart entries recording medical history, physical examination, informed consent, time-oriented anesthesia record, including the names of all drugs administered, doses and monitored physiological parameters.
- (L) Prevention, recognition and management of complications and emergencies.
- (m) Description, maintenance and use of moderate sedation monitors and equipment.
- (n) Discussion of abuse potential.
- (o) Description and rationale for the technique to be employed.
- (p) Prevention, recognition and management of systemic complications of moderate sedation, with particular attention to airway maintenance and support of the respiratory and cardiovascular systems.
- (q) Twenty cases, which may include group observation cases, that each meet all of the following requirements:

1. At least 3 cases must occur in person as live clinical dental experiences. These cases may occur at any time or location permitted by the education program. The remaining cases may include simulations or video presentations.

2. One case must have experience in returning a patient from deep to moderate sedation, which may be done by simulation or video presentation.

3. Include full review of patient medical history, including pertinent lab values.

4. Applicant shall be present and participate for the duration of live clinical dental experience cases up through recovery and discharge of the patient and shall participate in any remaining cases via simulation or video presentation to completion.

5. Applicant shall observe the administration of medicines.

6. Patient and any anesthesia monitors shall be in full view of the applicant.

**(2)** A board approved education program that provides comprehensive training for a class II permit - parenteral shall consist of a minimum of 60 hours in administration and management of moderate sedation, including all of the following course content:

(a) Historical, philosophical and psychological aspects of anxiety and pain control.

(b) Patient evaluation and selection through review of medical history taking, physical diagnosis and psychological profiling.

(c) Use of patient history and examination for ASA classification, risk assessment and pre-procedure fasting instruction.

(d) Definitions and descriptions of physiological and psychological aspects of anxiety and pain.

(e) Description of the sedation anesthesia continuum, with special emphasis on the distinction between the conscious and the unconscious state.

(f) Review of adult respiratory and circulatory physiology and related anatomy.

(g) Pharmacology of local anesthetics and agents used in moderate sedation, including drug interactions and contraindications.

(h) Indications and contraindications for use of moderate sedation.

(i) Review of dental procedures possible under moderate sedation.

(j) Patient monitoring using observation, monitoring equipment, with particular attention to vital signs, ventilation, breathing and reflexes related to consciousness.

(k) Maintaining proper records with accurate chart entries recording medical history, physical examination, informed consent, time oriented anesthesia record, including the names of all drugs administered, doses and monitored physiological parameters.

(L) Prevention, recognition and management of complications and emergencies.

(m) Description, maintenance and use of moderate sedation monitors and equipment.

(n) Discussion of abuse potential.

(o) Intravenous access anatomy, equipment and technique.

(p) Prevention, recognition and management of complications of venipuncture and other parenteral techniques.

(q) Description and rationale for the technique to be employed.

(r) Prevention, recognition and management of systemic complications of moderate sedation, with particular attention to airway maintenance and support of the respiratory and cardiovascular systems.

(s) Twenty individually managed cases that each meet the all of following requirements:

1. Must occur in person.

2. Include full review of patient medical history, including pertinent lab values.

3. Applicant shall be in the room for the duration of the case;

4. Applicant shall supervise recovery and discharge of the patient.

5. Applicant shall have full view of the patient and access to the patient's airway.

6. Anesthesia monitors shall be in full view of the applicant.

**History:** CR 19-132: cr. Register August 2020 No. 776, eff. 9-1-20; correction in (1) (intro.), (2) (intro.) made under s. 35.17, Stats., Register August 2020 No. 776, eff. 9-1-20; EmR2216: renum. (1) (q) to (1) (q) (intro.) and am., cr. (1) (q) 1. to 5., renum. (2) (s) to (2) (s) (intro.) and am., cr. (2) (q) 1. to 6., eff. 11-28-22; CR 22-086: renum. (1) (q) to (1) (q) (intro.) and am., cr. (1) (q) 1. to 6., renum. (2) (s) to (2) (s) (intro.) and am., cr. (2) (q) 1. to 6. Register October 2023 No. 814, eff. 11-1-23; correction in (1) (q) (intro.), (2) (s) (intro.), 1. to 5. made under s. 35.17, Stats., Register October 2023 No. 814.

**DE 11.075 Continuing education.** A dentist with a sedation permit shall complete 2 hours of continuing education on the topic of sedation and anesthesia each biennium. The continuing education completed under this section shall count toward the continuing education requirement under s. DE 13.03.

**History:** CR 19-132: cr. Register August 2020 No. 776, eff. 9-1-20.

**DE 11.085 Auxiliary Personnel. (1)** Auxiliary personnel shall be certified in basic life support for the health care provider.

**(2)** A dentist administering sedation shall have one additional individual present during the procedure and another individual on the premises and available to respond to a patient emergency.

**(3)** A dentist administering general anesthesia or deep sedation shall have 2 additional individuals present during the procedure.

**(4)** If a dentist is both performing the dental procedure and administering moderate or deep sedation, or general anesthesia, one auxiliary personnel must be designated to only monitor the patient. The designated auxiliary personnel may be one of the additional individuals required in sub. (2) or (3).

**History:** CR 19-132: cr. Register August 2020 No. 776, eff. 9-1-20.

**DE 11.09 Standards of care. (1) GENERAL.** A dentist administering anesthesia or sedation shall be in the room to continuously monitor the patient until the patient meets the criteria for transfer to recovery and may not leave the dental office or facility until the patient meets the criteria for discharge and is discharged from the dental office or facility.

**(2)** Preoperative preparation. Preoperative preparation for the administration of anesthesia or sedation shall include all of the following steps:

(a) Determine the adequacy of the oxygen supply and equipment necessary to deliver oxygen under positive pressure.

(b) Take and record the patient's baseline vital signs, including blood pressure, respiratory rate and heart rate. For the administration of general anesthesia and deep and moderate sedation, baseline vital signs include weight, height, blood pressure, heart rate, respiratory rate, blood oxygen saturation by pulse oximetry, and body temperature when appropriate. The inability to take vital signs due to the patient's behavior or condition shall be documented in the patient record.

(c) Complete medical history and a focused physical evaluation.

(d) Instruct the patient on specific dietary limitations based upon the sedative and anesthetic technique to be used and patient's physical status.

(e) Provide preoperative instructions to the patient or, as appropriate, to the patient's parent or legal guardian.

(f) Notify and require a patient to arrive and leave with a vested escort.

(g) Establish and secure, where clinically indicated, an intravenous line throughout the procedure, except as provided for pediatric or special needs patients.

(h) Advise the patient of fasting requirements.

**(3) MONITORING AND EVALUATION OF GENERAL ANESTHESIA, DEEP SEDATION OR MODERATE SEDATION.** A dentist administering general anesthesia, deep sedation, or moderate sedation shall continuously monitor and evaluate all of the following:

(a) Level of consciousness.

(b) Oxygenation saturation by pulse oximetry.

(c) Chest excursions.

(d) Ventilation monitored by end-tidal carbon dioxide.

(e) Auscultation of breath sounds by precordial or pretracheal stethoscope.

(f) Respiration rate.

(g) Heart rate and rhythm via electrocardiogram.

(h) Blood pressure.

(i) Color of mucosa, skin or blood.

(j) Body temperature whenever triggering agents associated with malignant hyperthermia are administered.

**(4) MONITORING AND EVALUATION OF MINIMAL SEDATION.** A dentist administering minimal sedation shall continuously monitor and evaluate all of the following:

(a) Level of consciousness.

(b) Chest excursions.

(c) Ventilation by either auscultation of breath sounds or by verbal communication with the patient.

(d) Color of mucosa, skin or blood.

(e) Blood pressure, heart rate, and oxygenation saturation by pulse oximetry pre-operatively and post-operative and intraoperatively.

**(5) RECOVERY AND DISCHARGE.** A dentist shall maintain and implement recovery and discharge procedures which include all of the following:

(a) Immediate availability of oxygen and suction equipment.

(b) Monitor and document the patient's blood pressure, heart rate, oxygenation and level of consciousness during recovery.

(c) Determine and document that blood pressure, heart rate, level of consciousness, oxygenation, ventilation, and circulation are satisfactory for discharge.

(d) Post-operative verbal and written instructions provided.

(e) If a reversal agent is administered before discharge criteria have been met, the patient must be monitored until recovery is assured.

**(6) EQUIPMENT.** A dentist administering anesthesia or sedation shall have immediately available and maintain equipment, appropriate for patients served, in good working order according to manufacturer's directions all the following equipment:

(a) Alternative light source for use during power failure.

(b) Automated external defibrillator.

(c) Disposable syringes in assorted sizes.

(d) Oxygen in a portable cylinder E tank capable of administering positive pressure ventilation via a bag-valve-mask system.

(e) Sphygmomanometer and stethoscope for pediatric and adult patients.

(f) Suction and backup system.

(g) An operating chair capable of withstanding cardiopulmonary resuscitation or a back board.

(h) Emergency airway equipment including oral and nasal airway and advanced airway devices for appropriate patient populations being served.

**(7) DRUGS.** A dentist administering anesthesia or sedation shall be responsible to maintain and properly store drugs in current and unexpired condition and properly dispose of expired drugs. The following drugs shall be maintained in an emergency drug kit:

(a) Non-enteric coated aspirin.

(b) Ammonia inhalants.

(c) Antihistamine.

(d) Antihypoglycemic agent.

(e) Bronchodilator.

(f) Epinephrine.

(g) Oxygen.

(h) Nitroglycerin.

(i) Reversal agents.

(j) Muscle relaxant.

**(8) EMERGENCY MANAGEMENT.** A dentist administering anesthesia or sedation shall be responsible for the sedative or anesthetic management, diagnosis and treatment of emergencies related to the administration of anesthesia or sedation and for ensuring the equipment, drugs and protocols for patient rescue are immediately available.

**(9) ANESTHESIA RECORD.** A dentist shall maintain an anesthesia record that documents all events related to the administration of the sedative or anesthetic agents, including all of the following:

(a) Time-oriented anesthesia record that includes the date, names of all drugs administered, dosages, methods of administration and monitored physiological parameters.

(b) Heart rate, respiratory rate, blood pressure, pulse oximetry, and end-tidal carbon dioxide measurements shall be recorded in 5-minute intervals for general anesthesia, deep and moderate sedation.

(c) The duration of the procedure.

(d) The individuals present during the procedure.

**History:** CR 04-095: cr. Register August 2006 No. 608, eff. 1-1-07; CR 19-132: r. and recr. Register August 2020 No. 776, eff. 9-1-20; correction in (2) (e) made under s. 35.17, Stats., Register August 2020 No. 776.

**DE 11.10 Reporting of adverse occurrences related to sedation or anesthesia administration. (1m)** A dentist shall report to the board any anesthesia-related or sedation-related mortality which occurs during or as a result of treatment provided by the dentist within 2 business days of the dentist's notice of such mortality.

**(2m)** A dentist shall report any morbidity which may result in permanent physical or mental injury as a result of the administration of anesthesia or sedation by the dentist to the board within 30 days of the notice of the occurrence of any such morbidity.

**(3m)** The report shall include all of the following:

(a) A description of the dental procedures.

(b) The names of all participants in the dental procedure and any witnesses to the adverse occurrence.

(c) A description of the preoperative physical condition of the patient.

(d) A list of drugs and dosage administered before and during the dental procedures.

(e) A detailed description of the techniques utilized in the administration of all drugs used during the dental procedure.

(f) A description of the adverse occurrence, including the

symptoms of any complications, any treatment given to the patient, and any patient response to the treatment.

(g) A description of the patient's condition upon termination of any dental procedures undertaken.

**Note:** Forms are available at the office of the Dentistry Examining Board located at 1400 East Washington Avenue, P.O. Box 8935, Madison, WI 53708.

**History:** CR 04-095: cr. Register August 2006 No. 608, eff. 1-1-07; CR 19-132:

r. (intro.), renum. (1) to (7) to (3) (a) to (g), cr. (1m), (2m), (3m) (intro.) Register August 2020 No. 776, eff. 9-1-20; correction in (1m) made under s. 35.17, Stats., and renum. (3) (a) to (g) to (3m) (a) to (g) under s. 13.92 (4) (b) 7., Stats., Register August 2020 No. 776.