

CHAPTER 579
SEDATION AND NITROUS OXIDE

Chapter rescission date pursuant to Iowa Code section 17A.7: 4/9/30

481—579.1(153) Nitrous oxide inhalation analgesia.

579.1(1) A dentist may use nitrous oxide inhalation analgesia on an outpatient basis for dental patients provided the dentist has completed training and complies with the following:

- a. Has adequate equipment with fail-safe features.
- b. Has inspection and maintenance performed on equipment as needed to ensure its proper performance, maintains documentation of such, and provides the documentation to the board upon request.
- c. Ensures the patient is continually monitored by a patient monitor while receiving nitrous oxide inhalation analgesia.

579.1(2) A dentist shall provide direct supervision of the administration and monitoring of nitrous oxide and establish a written office protocol for taking vital signs, adjusting anesthetic concentrations, and addressing emergency situations that may arise. The dentist is responsible for the dismissal of the patient following completion of the procedure.

579.1(3) A dental hygienist may administer and monitor nitrous oxide inhalation analgesia when the services have been prescribed by a dentist and the hygienist has completed board-approved training.

579.1(4) A dental assistant who has completed a board-approved expanded function course or holds a current Dental Anesthesia Assistant National Certification Examination (DAANCE) certification may monitor a patient who is receiving nitrous oxide after the dentist has induced the patient and established the maintenance level. A dental assistant may make adjustments to decrease the nitrous oxide concentration while monitoring the patient or may turn off oxygen delivery at the completion of the dental procedure.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.2(153) Minimal sedation standards.

579.2(1) A dentist shall evaluate a patient prior to the start of any sedative procedure. In healthy or medically stable patients (ASA I, II), the dentist should review the patient's current medical history and medication use. For a patient with significant medical considerations (ASA III, IV), a dentist may need to consult with the patient's primary care provider or consulting medical specialist. A dentist may only provide minimal sedation after obtaining informed consent from the patient or the patient's parent or legal guardian.

579.2(2) Minimal sedation for ASA I or II nonpediatric patients.

a. A dentist may prescribe or administer a single medication for minimal sedation via the enteral route that does not exceed the maximum recommended dose (MRD) for unmonitored home use. A dentist may only administer a supplemental dose of the same drug if the clinical half-life of the initial dose has passed and the total aggregate dose does not exceed 1.5 times the MRD on the day of treatment.

b. A dentist may administer a single medication for minimal sedation via the enteral route that does not exceed the MRD for monitored use on the day of treatment.

c. A dentist may utilize nitrous oxide inhalation analgesia in combination with a single enteral drug.

579.2(3) Minimal sedation for ASA III, ASA IV or pediatric patients.

a. A dentist may prescribe or administer a single medication for minimal sedation via the enteral route that does not exceed the MRD for unmonitored home use.

b. A dentist may administer a single medication for minimal sedation via the enteral route that does not exceed the MRD for monitored use on the day of treatment.

c. A dentist may only administer nitrous oxide inhalation analgesia for minimal sedation of ASA III or IV patients or pediatric patients provided the concentration does not exceed 50 percent and is not used in combination with any other drug.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.3(153) Shared standards for moderate sedation, deep sedation and general anesthesia.

579.3(1) A dentist may only administer moderate sedation, deep sedation or general anesthesia if the dentist holds a current moderate sedation permit or general anesthesia permit pursuant to rule 481—572.11(153).

579.3(2) A dentist administering sedation anesthesia must maintain current advanced cardiac life support (ACLS) certification. A dentist administering moderate sedation to pediatric patients may maintain current pediatric advanced life support (PALS) certification in lieu of current ACLS certification.

579.3(3) A dentist may only start a sedative procedure after evaluating a patient. A dentist should review a patient's medical history, medication(s) and NPO (nothing by mouth) status. For a patient with significant medical considerations (ASA III, IV), a dentist may need to consult with the patient's primary care provider or consulting medical specialist. The dentist should consult the body mass index as part of the preprocedural workup.

579.3(4) A dentist may only administer sedation or anesthesia if the following requirements are met:

- a. Facilities are appropriately staffed to reasonably handle emergencies;
- b. A patient monitor remains present in the treatment room to continually monitor the patient until the patient returns to a level of minimal sedation;
- c. The dentist provides postoperative verbal and written instructions to the patient and caregiver prior to discharging the patient;
- d. The dentist remains in the facility until the patient meets the criteria for discharge;
- e. The dentist or another designated permit holder or licensed sedation provider is available for appropriate postoperative aftercare for a minimum of 48 hours following the administration of sedation; and
- f. The dentist establishes emergency protocols that comply with the following:
 - (1) Establishment of a procedure for immediate access to backup emergency services;
 - (2) Employment of initial life-saving measures by a patient monitor in the event of an emergency, including activation of the emergency medical service (EMS) system for life-threatening complications;
 - (3) Avoidance of chest or airway obstruction when applying an immobilization device and allowance for the ongoing exposure of a hand or foot; and
 - (4) Availability of a functioning suction apparatus as well as the ability to provide >90 percent oxygen and positive-pressure ventilation, along with age- and size-appropriate rescue equipment in the recovery room for pediatric patients.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.4(153) Moderate sedation standards.

579.4(1) Moderate sedation for ASA I or II nonpediatric patients.

- a. A dentist may prescribe or administer a single enteral drug in excess of the MRD on the day of treatment.
- b. A dentist may prescribe or administer a combination of more than one enteral drug.
- c. A dentist may administer nitrous oxide with more than one enteral drug.
- d. A dentist may administer a medication for moderate sedation via the parenteral route in single or incremental doses.
- e. A dentist may only administer drug(s) or techniques, or both, provided there is a margin of safety wide enough to render unintended loss of consciousness unlikely.

579.4(2) Moderate sedation for ASA III, ASA IV or pediatric patients. A dentist who does not meet the requirements of 481—subparagraph 572.11(1)“b”(3) may not administer moderate sedation, deep sedation or general anesthesia to pediatric or ASA III or IV patients. The following constitute moderate sedation:

- a. The use of one or more enteral drugs in combination with nitrous oxide.
- b. The administration of any intravenous drug.

579.4(3) A dentist may administer moderate sedation in a facility provided the following requirements are met:

- a. Have at least one patient monitor observe the patient while the patient is under moderate sedation; and

b. Utilize capnography or a pretracheal/precordial stethoscope as stipulated below:

(1) Use capnography to monitor end-tidal carbon dioxide unless the use of capnography is precluded or invalidated by the nature of the patient, procedure or equipment.

(2) In cases where the use of capnography is precluded or invalidated for the reasons listed previously, a pretracheal or precordial stethoscope must be used to continually monitor the auscultation of breath sounds.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.5(153) Deep sedation or general anesthesia standards.

579.5(1) The administration of anesthetic sedative agents intended for deep sedation or general anesthesia, including but not limited to Propofol, Ketamine and Dilaudid, is deemed to constitute deep sedation or general anesthesia.

579.5(2) A dentist may administer deep sedation or general anesthesia provided the following requirements are met:

a. Have at least two patient monitors observe the patient while the patient is under deep sedation or general anesthesia;

b. Utilize capnography and a pretracheal/precordial stethoscope; and

c. If the dentist has a recovery area separate from the operatory, the recovery area has oxygen and suction equipment.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.6(153) Training and certification requirements for patient monitors. Patient monitors must be capable of administering emergency support and complete training as required by this rule.

579.6(1) Patient monitors who will observe patients receiving deep sedation or general anesthesia must have a current certification in ACLS, PALS, or DAANCE.

579.6(2) A patient monitor who will observe patients receiving moderate sedation may meet one of the requirements listed in subrule 579.6(1) or complete on-site training for a minimum of three hours in airway management that provides the knowledge and skills necessary to competently assist with emergencies, including but not limited to recognizing apnea and airway obstruction.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.7(153) Recordkeeping requirements for nitrous oxide, sedation or anesthesia. In addition to the recordkeeping requirements specified in rule 481—574.9(153,272C), the patient record must include the following information as applicable when administering nitrous oxide, sedation or anesthesia.

579.7(1) The concentration of nitrous oxide administered; dosage of medication administered, including any prescription for at-home unmonitored use, if applicable; duration of administration; and vital signs taken.

579.7(2) When administering moderate sedation, deep sedation or general anesthesia, a time-oriented anesthesia record that contains preoperative and postoperative vital signs; the names of all drugs administered, including local anesthetics and nitrous oxide, dosages, anesthesia time in minutes, and monitors used; and monitored physiological parameters, including oxygenation, ventilation, and circulation. When administering deep sedation or general anesthesia, pulse oximetry, heart rate, respiratory rate, and blood pressure must be recorded continually until the patient is fully ambulatory.

579.7(3) When administering moderate sedation, deep sedation or general anesthesia, the record should include the name of the person to whom the patient was discharged.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.8(153) Facility and equipment requirements for moderate sedation, deep sedation or general anesthesia.

579.8(1) A permit holder shall notify the board office in writing within 60 days of a change in location or the addition of a sedation facility.

579.8(2) A dentist may only administer moderate sedation or anesthesia in a facility that is permanently and properly equipped. A dentist is required to be trained in and maintain, at a minimum, the following equipment:

- a.* Electrocardiogram (EKG) monitor;
- b.* Positive pressure oxygen;
- c.* Suction;
- d.* Laryngoscope and blades;
- e.* Endotracheal tubes;
- f.* Magill forceps;
- g.* Oral airways;
- h.* Stethoscope;
- i.* Blood pressure monitoring device;
- j.* Pulse oximeter;
- k.* Emergency drugs, in accordance with subrule 579.8(3);
- l.* Defibrillator;
- m.* Capnography machine;
- n.* Pretracheal or precordial stethoscope;
- o.* Nasopharyngeal airway (nasal trumpet); and
- p.* Any additional equipment necessary to establish intravascular or intraosseous access, which will be available until the patient meets discharge criteria.

579.8(3) Pursuant to paragraph 579.8(2)“*k*,” a dentist providing sedation at a dental facility is required to maintain on site emergency drugs that meet the needs of the following categories. At a minimum, a dentist providing moderate sedation shall maintain emergency drugs specified in paragraphs 579.8(3)“*a*” through “*f*.” A dentist providing deep sedation or general anesthesia shall maintain emergency drugs for all of the following categories:

- a.* Vasopressor.
- b.* Bronchodilator.
- c.* Benzodiazepine antagonist.
- d.* Narcotic antagonist.
- e.* Coronary artery vasodilator.
- f.* Low blood sugar medication.
- g.* Corticosteroid.
- h.* Antihistamine.
- i.* Antiarrhythmic.
- j.* Cardiopulmonary arrest IV medication.
- k.* Anticholinergic.
- l.* Neuromuscular blocker.
- m.* Antihypertensive.

579.8(4) The board or its designated agents may conduct facility inspections. A facility inspection may be required before a sedation permit is issued or before sedation services are provided at a new or updated facility. The actual costs associated with the on-site evaluation of the facility are the primary responsibility of the licensee. The cost to the licensee will not exceed the fee specified in 481—Chapter 571.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.9(153) Use of another licensed sedation provider or permit holder.

579.9(1) A dentist may only use the services of a licensed sedation provider or another permit holder to administer moderate sedation, deep sedation or general anesthesia in a dental facility if the following requirements are met:

- a.* The dentist holds a current moderate sedation or general anesthesia permit. A permit holder who does not meet the training requirement to administer moderate sedation to pediatric or ASA III or IV patients as stipulated in 481—subparagraph 572.11(1)“*b*”(3) may use another licensed sedation provider or qualified permit holder to administer moderate sedation to pediatric or ASA III or IV patients.
- b.* The dentist remains present in the treatment room for the duration of any dental treatment.
- c.* The facility is a permanently and properly equipped facility pursuant to the provisions of this chapter.

d. The permit holder assesses the need and patient suitability for sedation services. A permit holder may not interfere with any independent assessment performed by a licensed sedation provider.

579.9(2) When a licensed sedation provider or another permit holder is used to administer moderate sedation, deep sedation or general anesthesia, that provider constitutes one patient monitor for the purpose of complying with rule 481—579.6(153).

579.9(3) A dentist who does not hold a sedation permit is prohibited from using a licensed sedation provider or permit holder to provide moderate sedation, deep sedation or general anesthesia.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

481—579.10(153) Advertising. A dentist will ensure that any advertisements related to the availability of antianxiety premedication or minimal sedation clearly reflect the level of sedation provided and are not misleading.

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481—579.11(153) Noncompliance. Violations of the provisions of this chapter may result in disciplinary measures as deemed appropriate by the board.

[ARC 8993C, IAB 3/5/25, effective 4/9/25]

These rules are intended to implement Iowa Code section 153.13.

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