

NEVADA STATE BOARD
of
DENTAL EXAMINERS

ANESTHESIA SUBCOMMITTEE
TELEPHONE CONFERENCE

DECEMBER 15, 2015

5:30 P.M.

PUBLIC BOOK

Assembly Bill 89
Definitions of Minimal & Moderate Sedation

Definitions of Minimal and Moderate Sedation-AB89

Sec. 20. Chapter 631 of NRS is hereby amended by adding thereto a new section to read as follows:

“Minimal sedation” means a minimally depressed level of consciousness, produced by a pharmacologic or nonpharmacologic method, that retains the patient’s ability to independently and continuously maintain an airway and respond normally to tactile stimulation and verbal command, and during which cognitive function and coordination may be modestly impaired, but ventilatory and cardiovascular functions are unaffected

Sec. 21. NRS 631.005 is hereby amended to read as follows:

631.005 As used in this chapter, unless the context otherwise requires, the words and terms defined in NRS 631.015 to 631.105, inclusive, *and section 20 of this act* have the meanings ascribed to them in those sections.

Sec. 22. NRS 631.025 is hereby amended to read as follows:

631.025 [~~Conscious~~] *“Moderate sedation”* means a [~~minimally~~] *drug-induced* depressed level of consciousness, produced by a pharmacologic or nonpharmacologic method or a combination thereof, [~~in~~] *during* which [~~the~~] :

1. *The patient retains the ability* [~~independently and continuously to maintain an airway and~~] *to respond* [~~appropriately~~] *purposefully* to [~~physical stimulation and~~] verbal commands [~~and~~] , *either alone or accompanied by light tactile stimulation;*

2. *Spontaneous ventilation is adequate and no interventions are required to maintain a patent airway; and*

3. *Cardiovascular function is usually maintained*

CURRENT ANESTHESIA REGULATIONS
NAC 631.2211-NAC 631.2256

NAC 631.003 “Conscious sedation” defined. ([NRS 631.190](#)) “Conscious sedation” has the meaning ascribed to it in [NRS 631.025](#).

NAC 631.004 “Conscious sedation permit” defined. ([NRS 631.190](#)) “Conscious sedation permit” means a permit that:

1. Is issued by the Board pursuant to [NAC 631.2213](#); and
2. Authorizes the holder to administer conscious sedation to a patient.

NAC 631.2211 Scope. ([NRS 631.190](#), [631.265](#)) [NAC 631.2213](#) to [631.2256](#), inclusive, do not apply to the administration of:

1. Local anesthesia;
2. Nitrous oxide-oxygen analgesia, if the delivery system for the nitrous oxide-oxygen contains a mechanism which guarantees that an oxygen concentration of at least 25 percent will be administered to the patient at all times during the administration of the nitrous oxide; and
3. Oral medication that is administered to a patient to relieve anxiety in the patient, if the medication is not given in a dosage that is sufficient to induce in a patient a controlled state of depressed consciousness or unconsciousness similar to the state produced pursuant to the administration of general anesthesia, deep sedation or conscious sedation.

NAC 631.2212 Board to determine degree of sedation. ([NRS 631.190](#), [631.265](#)) In a proceeding of the Board at which the Board must determine the degree of sedation or level of consciousness of a patient, the Board will base its findings on:

1. The type and dosage of medication that was administered or is proposed for administration to the patient; and
2. The degree of sedation or level of consciousness that should reasonably be expected to result from that type and dosage of medication.

NAC 631.2213 Permit required; qualifications of applicants. ([NRS 631.190](#), [631.265](#))

1. Except as otherwise set forth in [NAC 631.2211](#) to [631.2256](#), inclusive, no dentist may:
 - (a) Use general anesthesia or deep sedation for dental patients, except in a facility accredited by The Joint Commission, unless he or she first obtains a general anesthesia permit; or
 - (b) Use conscious sedation for dental patients, except in a facility accredited by The Joint Commission, unless he or she first obtains a general anesthesia permit or conscious sedation permit.
- ↳ A separate general anesthesia permit or conscious sedation permit, as appropriate, is required for each location at which a dentist administers general anesthesia, deep sedation or conscious sedation.

2. To obtain a general anesthesia permit or conscious sedation permit, a dentist must apply to the Board for such a permit on a form prescribed by the Board, submit any fees that are set by the Board pursuant to [NRS 631.345](#) and produce evidence showing that he or she is a dentist who is licensed in this State, and:

- (a) For a conscious sedation permit, the applicant must show evidence of:
 - (1) The completion of a course of study, subject to the approval of the Board, of not less than 60 hours dedicated exclusively to the administration of conscious sedation, and the

successful management of the administration of conscious sedation to not less than 20 patients;
or

(2) The completion of a program for specialty training which is approved by the Commission on Dental Accreditation of the American Dental Association and which includes education and training in the administration of conscious sedation that is equivalent to the education and training described in subparagraph (1) and completion of an Advanced Cardiac Life Support course given by the American Heart Association or, if licensed as a specialist in pediatric dentistry, completion of a Pediatric Advanced Life Support course given by the American Heart Association.

(b) For a general anesthesia permit, the applicant must show evidence of the completion of an Advanced Cardiac Life Support course given by the American Heart Association and:

(1) The completion of a program, subject to the approval of the Board, of advanced training in anesthesiology and related academic subjects beyond the level of undergraduate dental school in a training program as described in the *Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students*, published by the American Dental Association, 211 East Chicago Avenue, Chicago, Illinois 60611, and available, free of charge, at the Internet address http://www.ada.org/prof/resources/positions/statements/anxiety_guidelines.pdf; or

(2) The completion of a graduate program in oral and maxillofacial surgery which has been approved by the Commission on Dental Accreditation of the American Dental Association.

NAC 631.2217 Review of holder of permit; renewal of permit. ([NRS 631.190](#), [631.265](#))

1. The holder of a general anesthesia permit or conscious sedation permit is subject to review by the Board at any time.

2. Each general anesthesia permit and conscious sedation permit must be renewed annually or biennially, as applicable, based on the renewal period set forth in [NRS 631.330](#) for the type of license held by the holder of the permit.

NAC 631.2219 Inspection and evaluation; reevaluation. ([NRS 631.190](#), [631.265](#))

1. The Board will require an inspection and evaluation of the facility, equipment, personnel, records of patients and the procedures used by every dentist who seeks or holds a general anesthesia permit or conscious sedation permit, and of the dentist himself or herself, before issuing such an original permit to the dentist, and at least once in every 5-year period thereafter.

2. The Board will renew general anesthesia permits and conscious sedation permits annually or biennially, as applicable, based on the renewal period set forth in [NRS 631.330](#) for the type of license held by the holder of the permit, unless the holder is informed in writing, 60 days before the date for renewal, that a reevaluation of his or her credentials is required. In determining whether reevaluation is necessary, the Board will consider, among other factors, complaints by patients and reports of adverse occurrences. A reevaluation will, if appropriate, include an inspection of the facility, equipment, personnel, records of patients and the procedures used by the holder, and an examination of his or her qualifications.

NAC 631.2221 Inspectors and evaluators; participation of members of Board. ([NRS 631.190](#), [631.265](#))

1. When an inspection or evaluation is required to issue or renew a general anesthesia permit or conscious sedation permit, the Board will designate two or more persons, each of

whom holds a general anesthesia permit or conscious sedation permit and has practiced general anesthesia, deep sedation or conscious sedation, as applicable, for a minimum of 3 years preceding his or her appointment, exclusive of his or her training in the administration of anesthesia or sedation. At least one of the inspectors or evaluators must have had experience in the evaluation of dentists using general anesthesia, deep sedation or conscious sedation, as applicable. At least one member of the inspection or evaluation team must have had substantial experience in the administration of the type of anesthesia contemplated for use by the dentist being evaluated and must hold the type of permit for which the dentist is applying.

2. Any member of the Board who is a dentist may observe or consult in any inspection or evaluation. A member of the Board who is not a dentist may be present at an observation but may not participate in any grading or evaluation resulting from the inspection or evaluation.

NAC 631.2223 Inspections and evaluations: General requirements. ([NRS 631.190, 631.265](#)) An inspection or evaluation ordered by the Board must be conducted in all offices where general anesthesia, deep sedation or conscious sedation is to be administered and, except as otherwise required in [NAC 631.2236](#), must consist of:

1. An evaluation of the office's facilities and equipment, records and emergency medications; and

2. A demonstration of:

(a) The administration to a patient who is receiving dental treatment of the type of anesthesia or sedation for which the dentist is applying for a permit;

(b) Simulated emergencies in the surgical area of the dental office with participation by the members of the staff who are trained to handle emergencies;

(c) A dental procedure utilizing the type of anesthesia or sedation for which the dentist is applying for a permit;

(d) Any anesthesia or sedation technique that is routinely employed during the administration of anesthesia or sedation;

(e) The appropriate monitoring of a patient during anesthesia or sedation; and

(f) The observation of a patient during recovery and the time allowed for recovery.

NAC 631.2225 Inspections and evaluations: Simulated emergencies. ([NRS 631.190, 631.265](#)) A dentist's office inspected or evaluated for the issuance or renewal of a general anesthesia permit or conscious sedation permit must meet the following minimum standards with regard to simulated emergencies. The dentist and his or her staff must demonstrate a knowledge of and a method of treatment for the following types of emergencies:

1. Airway obstruction laryngospasm;
2. Bronchospasm;
3. Emesis and aspiration of foreign material under anesthesia;
4. Angina pectoris;
5. Myocardial infarction;
6. Hypotension;
7. Hypertension;
8. Cardiac arrest;
9. Allergic reaction;
10. Convulsions;
11. Hypoglycemia;
12. Asthma;
13. Respiratory depression;

14. Allergy to or overdose from local anesthesia;
15. Hyperventilation syndrome; and
16. Syncope.

NAC 631.2227 Inspections and evaluations: Physical facilities and equipment. ([NRS 631.190](#), [631.265](#)) A dentist's office inspected or evaluated for the issuance or renewal of a general anesthesia permit, conscious sedation permit or certificate of site approval must meet the following minimum standards with regard to physical facilities and equipment:

1. The operating theater must be large enough to accommodate the patient adequately on a table or in a dental chair and to allow an operating team consisting of at least three persons to move freely about the patient.

2. The operating table or dental chair must:

(a) Allow the patient to be placed in a position such that the operating team can maintain the airway;

(b) Allow the operating team to alter the patient's position quickly in an emergency; and

(c) Provide a firm platform for the management of cardiopulmonary resuscitation.

3. The lighting system must be adequate to allow an evaluation of the patient's skin and mucosal color. An alternate lighting system must derive its power from batteries and must be sufficiently intense to allow completion of any procedure underway at the time of a general power failure.

4. Suction equipment must be available that allows aspiration of the oral and pharyngeal cavities. An alternate suction device that will function effectively during a general power failure must be available.

5. A system for delivering oxygen must have adequate full-face masks and appropriate connectors, and be capable of delivering oxygen to the patient under positive pressure. An adequate alternate system for delivering oxygen is also required.

6. A recovery area must be provided that has available oxygen, adequate lighting, suction and electrical outlets. The recovery area may be the operating theater. A member of the staff must be able to observe the patient at all times during the recovery.

7. Except as otherwise provided in this subsection, ancillary equipment must include:

(a) A laryngoscope complete with an adequate selection of blades and spare batteries and bulbs;

(b) Endotracheal tubes and appropriate connectors;

(c) Oral airways;

(d) A tonsillar or pharyngeal suction tip adaptable to all office suction outlets;

(e) An endotracheal tube type forcep;

(f) A sphygmomanometer and stethoscope;

(g) An electrocardioscope and defibrillator;

(h) Adequate equipment for the establishment of an intravenous infusion; and

(i) A pulse oximeter.

↪ A dentist's office inspected or evaluated for the issuance or renewal of a conscious sedation permit is not required to have the ancillary equipment described in paragraphs (a), (b), (e) and (g).

NAC 631.2229 Inspections and evaluations: Records of patients. ([NRS 631.190](#), [631.265](#)) A dentist's office inspected or evaluated for the issuance or renewal of a general

anesthesia permit, conscious sedation permit or certificate of site approval must meet the following minimum standards with regard to the records of patients:

1. Adequate medical history and records of physical evaluation.
2. Records of the administration of anesthesia must include:
 - (a) The patient's blood pressure and pulse;
 - (b) The names of the drugs and the amounts administered;
 - (c) The length of the procedure; and
 - (d) Any complications of anesthesia.

NAC 631.2231 Inspections and evaluations: Emergency drugs. ([NRS 631.190](#), [631.265](#))

Except as otherwise provided in this section, a dentist's office inspected or evaluated for the issuance or renewal of a general anesthesia permit, conscious sedation permit or certificate of site approval must maintain emergency drugs of the following categories which must be immediately available for use on the patient:

1. Vasopressor;
2. Corticosteroid;
3. Bronchodilator;
4. Muscle relaxant;
5. Intravenous medication for the treatment of cardiopulmonary arrest;
6. Appropriate drug antagonist;
7. Antihistaminic;
8. Anticholinergic;
9. Antiarrhythmic;
10. Coronary artery vasodilator;
11. Anti-hypertensive; and
12. Anti-convulsive.

↪ A dentist's office that is inspected or evaluated for the issuance or renewal of a conscious sedation permit is not required to maintain the emergency drugs described in subsections 4, 5, 9 and 11.

NAC 631.2233 Inspections and evaluations: Recommendations of inspectors or evaluators; decision of Board. ([NRS 631.190](#), [631.265](#))

1. The persons performing an inspection or evaluation of a dentist's office for the issuance or renewal of a general anesthesia permit or conscious sedation permit shall grade the office as passing or failing. Within 10 days after completing the inspection or evaluation, each inspector or evaluator shall report his or her recommendation for passing or failing to the Board, setting forth the details supporting his or her conclusion. The Board is not bound by these recommendations.

2. The Board will make the final determination whether the office has passed or failed the inspection or evaluation and will notify the dentist whose office is the subject of the inspection or evaluation, in writing, of its findings within 30 days after the Board receives a recommendation from each inspector or evaluator who inspected or evaluated the office.

NAC 631.2235 Inspections and evaluations: Failure to pass; requests for reevaluations. ([NRS 631.190](#), [631.265](#))

1. A dentist whose office the Board determines has failed the inspection or evaluation is not entitled to have a general anesthesia permit or conscious sedation permit issued or renewed.

2. A dentist who has received a notice of failure from the Board may, within 15 days after receiving the notice, request the Board in writing for a reevaluation. The request for a reevaluation must state specific grounds supporting it.

3. If the reevaluation is granted by the Board, it will be conducted by different persons in the manner set forth by [NAC 631.2219](#) to [631.2233](#), inclusive, for an original evaluation.

4. No dentist who has received a notice of failing an inspection or evaluation from the Board may request more than one reevaluation within any period of 12 months.

NAC 631.2236 Certificate of site approval: General requirements. ([NRS 631.190](#), [631.265](#))

1. A dentist who is licensed in this State may employ:

(a) An anesthesiologist who is licensed as such by the State of Nevada; or

(b) A dentist who is licensed in this State and who holds a general anesthesia permit or conscious sedation permit,

↳ to administer general anesthesia, deep sedation or conscious sedation, as appropriate, to his or her patients at his or her office if he or she holds a certificate of site approval issued pursuant to this section.

2. A dentist who is licensed in this State and who desires to receive or renew a certificate of site approval must submit to the Board:

(a) An application for a certificate or for the renewal of a certificate, in a form approved by the Board;

(b) The fee for the inspection of a facility which is established by the Board pursuant to [NRS 631.345](#); and

(c) Written documentation which demonstrates that the anesthesiologist or dentist who is to be employed to administer the general anesthesia, deep sedation or conscious sedation holds an appropriate license or permit issued by the appropriate board in this State to administer such anesthesia or sedation and, if the person to be employed is an anesthesiologist, that the anesthesiologist maintains unrestricted active staff privileges within the department of anesthesiology at a hospital or surgical center approved by The Joint Commission.

3. Upon receipt of an application pursuant to this section, the Board will appoint one of its members or a representative of the Board to inspect the office of the applicant to determine whether the office complies with the requirements set forth in [NAC 631.2227](#), [631.2229](#) and [631.2231](#). The person conducting the inspection shall report his or her determination to the Board.

4. If the person conducting the inspection determines that the office of the applicant complies with the requirements of [NAC 631.2227](#), [631.2229](#) and [631.2231](#) and the applicant has otherwise met the requirements of this section, the Executive Director shall issue a certificate of site approval to the applicant.

5. A holder of a certificate of site approval shall maintain the information described in paragraph (c) of subsection 2 at his or her office at all times.

6. Each certificate of site approval issued by the Board must be renewed annually or biennially, as applicable, based on the renewal period set forth in [NRS 631.330](#) for the type of license held by the holder of the certificate.

7. The Board may reinspect the office of the holder of a certificate of site approval at any time.

NAC 631.2237 Procedures required before administration of anesthetic or sedation. ([NRS 631.190](#), [631.265](#))

1. Written consent of the patient must be obtained before the administration of a general anesthetic, deep sedation or conscious sedation, unless the dentist determines that an emergency situation exists in which delaying the procedure to obtain the consent would likely cause permanent injury to the patient. If the patient is a minor, the consent must be obtained from his or her parent or legal guardian.

2. A medical history must be taken before the administration of a general anesthetic, deep sedation or conscious sedation. A patient should be asked to describe any current medical conditions or treatments, including, without limitation, medications, drug allergies, impending or past operations and pregnancy, and to give other information that may be helpful to the person administering the anesthetic or sedation. The dentist is not required to make a complete medical examination of the patient and draw medical diagnostic conclusions. If a dentist suspects a medical problem and calls in a physician for an examination and evaluation, he or she may then rely upon that conclusion and diagnosis. Questions asked of and answers received from the patient must be permanently recorded and signed by the patient before the administration of any general anesthetic, deep sedation or conscious sedation, and this record must be a permanent part of the patient's record of treatment.

NAC 631.2239 Properly equipped facility required; qualifications of auxiliary personnel. ([NRS 631.190](#), [631.265](#))

1. A dentist using general anesthesia, deep sedation or conscious sedation shall maintain a properly equipped facility for the administration of the anesthesia or sedation which is staffed with supervised auxiliary personnel who are capable of reasonably handling procedures, problems and emergencies incident thereto.

2. A dentist using general anesthesia, deep sedation or conscious sedation shall ensure that his or her auxiliary personnel are certified in basic cardiopulmonary resuscitation by the American Heart Association.

NAC 631.224 Employment of certified registered nurse anesthetist. ([NRS 631.190](#), [631.265](#))

1. Any dentist who holds a general anesthesia permit pursuant to the provisions of [NAC 631.2211](#) to [631.2256](#), inclusive, may employ a certified registered nurse anesthetist to administer the general anesthesia, deep sedation or conscious sedation to a patient if the dentist is physically present and directly supervises the administration of the general anesthesia, deep sedation or conscious sedation to the patient. The holder of the permit must maintain at his or her office evidence in writing that the certified registered nurse anesthetist is licensed to practice in the State of Nevada and maintains unrestricted active staff privileges within the department of anesthesiology at a hospital or surgical center which is certified by The Joint Commission.

2. Except as otherwise provided in [NAC 631.2236](#), a dentist who does not hold a general anesthesia permit may not allow any person to administer general anesthesia, deep sedation or conscious sedation to his or her patients unless the treatment is rendered within a facility approved by The Joint Commission.

NAC 631.2241 Report of injuries to patients. ([NRS 631.190](#), [631.265](#)) Each holder of a general anesthesia permit, conscious sedation permit or certificate of site approval shall submit to the Board a complete report regarding any mortality or unusual incident which occurs outside a facility accredited by The Joint Commission and produces permanent injury to a patient or requires the hospitalization of a patient, as a direct result of the administration of general anesthesia, deep sedation or conscious sedation. The report must be submitted within 30 days after the date of the incident. If a dentist fails to report any incident as required by this section, his or her permit may be revoked.

NAC 631.2254 Temporary permits. ([NRS 631.190](#), [631.265](#))

1. The Board may grant a temporary permit to administer general anesthesia and deep sedation or a temporary permit to administer conscious sedation to an applicant who meets the qualifications for a permit to administer that type of anesthesia or sedation pursuant to [NAC 631.2213](#).

2. A temporary permit is valid for not more than 90 days, but the Board may, in any case it deems appropriate, grant a 90-day extension of the permit.

3. The Board may require the holder of a temporary permit to pass an on-site inspection as a condition of retaining the permit. If the holder fails the inspection, his or her permit will be revoked. In case of revocation, the holder of a temporary permit may apply to be reinspected in accordance with the procedures set forth in [NAC 631.2235](#).

NAC 631.2256 Continuing education required. ([NRS 631.190](#), [631.265](#), [631.342](#))

Every 2 years, the holder of a general anesthesia permit or conscious sedation permit must complete at least 3 hours in courses of study that specifically relate to anesthesia or sedation, as applicable, before the permit may be renewed. This training will be credited toward any continuing education required by [NAC 631.173](#).

PROPOSED ANESTHESIA REGULATIONS
NAC 631.003; NAC 631.004 and
NAC 631.2211-NAC 631.2256

NAC 631.003 “~~Conscious~~–*Minimal and Moderate sedation*–” defined. (NRS 631.190) “~~Conscious~~ sedation” has the meaning ascribed to it in [NRS 631.025](#).

NAC 631.004 “~~Conscious~~ *Minimal and Moderate sedation permit*” defined. (NRS 631.190) “~~Conscious~~–*Minimal and Moderate sedation permit*” means a permit that:

1. Is issued by the Board pursuant to [NAC 631.2213](#); and
2. Authorizes the holder to administer conscious sedation to a patient.

NAC 631.2211 **Scope.** (NRS 631.190, 631.265) [NAC 631.2213](#) to [631.2256](#), inclusive, do not apply to the administration of:

1. Local anesthesia;
2. Nitrous oxide-oxygen analgesia, if the delivery system for the nitrous oxide-oxygen contains a mechanism which guarantees that an oxygen concentration of at least 25 percent will be administered to the patient at all times during the administration of the nitrous oxide; and
3. Oral medication that is administered to a patient to relieve anxiety in the patient, if the medication is not given in a dosage that is sufficient to induce in a patient a controlled state of depressed consciousness or unconsciousness similar to the state produced pursuant to the administration of general anesthesia, deep sedation ~~or conscious sedation~~, *minimal or moderate sedation*.

NAC 631.2212 **Board to determine degree of sedation.** (NRS 631.190, 631.265) In a proceeding of the Board at which the Board must determine the degree of sedation or level of consciousness of a patient, the Board will base its findings on:

1. The type and dosage of medication that was administered or is proposed for administration to the patient; and
2. The degree of sedation or level of consciousness that should reasonably be expected to result from that type and dosage of medication.

NAC 631.2213 **Permit required; qualifications of applicants.** (NRS 631.190, 631.265)

1. Except as otherwise set forth in [NAC 631.2211](#) to [631.2256](#), inclusive, no dentist may:
 - (a) Use general anesthesia or deep sedation for dental patients, except in a facility accredited by The Joint Commission, unless he or she first obtains a general anesthesia permit, *deep sedation permit*; or
 - (b) Use ~~conscious sedation~~ *minimal or moderate sedation* for dental patients, except in a facility accredited by The Joint Commission, unless he or she first obtains a general anesthesia permit ~~or conscious sedation~~, *deep sedation, minimal or moderate sedation* permit.
↪ A separate ~~general anesthesia certificate of site~~ permit ~~or conscious sedation permit~~, as appropriate, is required for each location at which a dentist administers general anesthesia, deep sedation ~~or conscious sedation~~, *minimal or moderate sedation*.
2. To obtain a general anesthesia permit ~~or conscious sedation~~, *deep sedation, minimal or moderate sedation* permit, a dentist must apply to the Board for such a permit on a form prescribed by the Board, submit any fees that are set by the Board pursuant to [NRS 631.345](#) and produce evidence showing that he or she is a dentist who is licensed in this State, and:

(a) For a ~~conscious sedation~~ permit to administer *minimal sedation*, the applicant must show evidence of:

(1) The completion of a course of study, subject to the approval of the Board, of not less than ~~60 hours~~ *24 hours* dedicated exclusively to the administration of ~~conscious sedation~~ *minimal sedation*, and the successful management of the administration of ~~conscious sedation~~ *minimal sedation* to not less than ~~20~~ *10* patients and

(2) *Hold current certification in either ACLS or PALS, which the permit holder may not allow to expire, or successfully complete a course approved by the Board that provides instruction on medical emergencies and airway management;*

(b) For a permit to administer *moderate sedation*, the applicant must show evidence of:

(1) The completion of a course of study, subject to the approval of the Board, of not less than 60 hours dedicated exclusively to the administration of ~~conscious sedation~~ *moderate sedation*, and the successful management of the administration of ~~conscious sedation~~ *moderate sedation* to not less than 20 patients; or

(2) The completion of a program for specialty training which is approved by the Commission on Dental Accreditation of the American Dental Association and which includes education and training in the administration of ~~conscious sedation~~ *moderate sedation* that is equivalent to the education and training described in subparagraph (1) and completion of an Advanced Cardiac Life Support course given by the American Heart Association or, if licensed as a specialist in pediatric dentistry, completion of a Pediatric Advanced Life Support course given by the American Heart Association.

~~(b)~~ ~~(c)~~ For a general anesthesia permit, the applicant must show evidence of the completion of an Advanced Cardiac Life Support course given by the American Heart Association and:

(1) The completion of a program, subject to the approval of the Board, of advanced training in anesthesiology and related academic subjects beyond the level of undergraduate dental school in a training program as described in the *Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students*, published by the American Dental Association, 211 East Chicago Avenue, Chicago, Illinois 60611, and available, free of charge, at the Internet address http://www.ada.org/prof/resources/positions/statements/anxiety_guidelines.pdf; or

(2) The completion of a graduate program in oral and maxillofacial surgery which has been approved by the Commission on Dental Accreditation of the American Dental Association.

NAC 631.2217 Review of holder of permit; renewal of permit. (NRS 631.190, 631.265)

1. The holder of a general anesthesia ~~permit or conscious sedation~~ *deep sedation, minimal or moderate sedation* permit is subject to review by the Board at any time.

2. Each general anesthesia ~~permit and conscious sedation~~ *deep sedation, minimal or moderate sedation* permit must be renewed annually or biennially, as applicable, based on the renewal period set forth in [NRS 631.330](#) for the type of license held by the holder of the permit.

NAC 631.2219 Inspection and evaluation; reevaluation. (NRS 631.190, 631.265)

1. The Board will require an inspection and evaluation of the facility, equipment, personnel, records of patients and the procedures used by every dentist who seeks or holds a general anesthesia ~~permit or conscious sedation~~ *deep sedation, minimal or moderate sedation* permit, and of the dentist himself or herself, before issuing such an original permit to the dentist, and at least once in every 5-year period thereafter.

2. The Board will renew general anesthesia permits ~~and conscious sedation~~ *deep sedation, minimal or moderate sedation* permits annually or biennially, as applicable, based on the

renewal period set forth in [NRS 631.330](#) for the type of license held by the holder of the permit, unless the holder is informed in writing, 60 days before the date for renewal, that a reevaluation of his or her credentials is required. In determining whether reevaluation is necessary, the Board will consider, among other factors, complaints by patients and reports of adverse occurrences. A reevaluation will, if appropriate, include an inspection of the facility, equipment, personnel, records of patients and the procedures used by the holder, and an examination of his or her qualifications.

NAC 631.2221 Inspectors and evaluators; participation of members of Board. ([NRS 631.190, 631.265](#))

1. When an inspection or evaluation is required to issue or renew a general anesthesia ~~permit or conscious sedation permit,~~ *deep sedation, minimal or moderate sedation permit*, the Board will designate two or more persons, each of whom holds a general anesthesia, ~~permit, or conscious sedation~~ *deep sedation, minimal or moderate sedation* permit and has practiced general anesthesia, deep sedation ~~or conscious sedation,~~ *deep sedation, minimal or moderate sedation*, as applicable, for a minimum of 3 years preceding his or her appointment, exclusive of his or her training in the administration of anesthesia or sedation. At least one of the inspectors or evaluators must have had experience in the evaluation of dentists using general anesthesia, deep sedation ~~or conscious sedation~~ *minimal or moderate sedation*, as applicable. At least one member of the inspection or evaluation team must have had substantial experience in the administration of the type of anesthesia contemplated for use by the dentist being evaluated and must hold the type of permit for which the dentist is applying.

2. Any member of the Board who is a dentist may observe or consult in any inspection or evaluation. A member of the Board who is not a dentist may be present at an observation but may not participate in any grading or evaluation resulting from the inspection or evaluation.

NAC 631.2223 Inspections and evaluations: General requirements. ([NRS 631.190, 631.265](#)) An inspection or evaluation ordered by the Board must be conducted in all offices where general anesthesia, deep sedation ~~or conscious sedation,~~ *minimal or moderate sedation* is to be administered and, except as otherwise required in [NAC 631.2236](#), must consist of:

1. An evaluation of the office's facilities and equipment, records and emergency medications; and

2. A demonstration of:

(a) The administration to a patient who is receiving dental treatment of the type of anesthesia or sedation for which the dentist is applying for a permit;

(b) Simulated emergencies in the surgical area of the dental office with participation by the members of the staff who are trained to handle emergencies;

(c) A dental procedure utilizing the type of anesthesia or sedation for which the dentist is applying for a permit;

(d) Any anesthesia or sedation technique that is routinely employed during the administration of anesthesia or sedation;

(e) The appropriate monitoring of a patient during anesthesia or sedation; and

(f) The observation of a patient during recovery and the time allowed for recovery.

NAC 631.2225 Inspections and evaluations: Simulated emergencies. ([NRS 631.190, 631.265](#)) A dentist's office inspected or evaluated for the issuance or renewal of a general

anesthesia permit ~~or conscious sedation~~ *deep sedation, minimal or moderate sedation permit*, must meet the following minimum standards with regard to simulated emergencies. The dentist and his or her staff must demonstrate a knowledge of and a method of treatment for the following types of emergencies:

1. Airway obstruction laryngospasm;
2. Bronchospasm;
3. Emesis and aspiration of foreign material under anesthesia;
4. Angina pectoris;
5. Myocardial infarction;
6. Hypotension;
7. Hypertension;
8. Cardiac arrest;
9. Allergic reaction;
10. Convulsions;
11. Hypoglycemia;
12. Asthma;
13. Respiratory depression;
14. Allergy to or overdose from local anesthesia;
15. Hyperventilation syndrome; and
16. Syncope.

NAC 631.2227 Inspections and evaluations: Physical facilities and equipment. ([NRS 631.190](#), [631.265](#)) A dentist's office inspected or evaluated for the issuance or renewal of a general anesthesia permit, ~~conscious sedation permit~~ *deep sedation, minimal or moderate sedation permit* or certificate of site approval must meet the following minimum standards with regard to physical facilities and equipment:

1. The operating theater must be large enough to accommodate the patient adequately on a table or in a dental chair and to allow an operating team consisting of at least three persons to move freely about the patient.
2. The operating table or dental chair must:
 - (a) Allow the patient to be placed in a position such that the operating team can maintain the airway;
 - (b) Allow the operating team to alter the patient's position quickly in an emergency; and
 - (c) Provide a firm platform for the management of cardiopulmonary resuscitation.
3. The lighting system must be adequate to allow an evaluation of the patient's skin and mucosal color. An alternate lighting system must derive its power from batteries and must be sufficiently intense to allow completion of any procedure underway at the time of a general power failure.
4. Suction equipment must be available that allows aspiration of the oral and pharyngeal cavities. An alternate suction device that will function effectively during a general power failure must be available.
5. A system for delivering oxygen must have adequate full-face masks and appropriate connectors, and be capable of delivering oxygen to the patient under positive pressure. An adequate alternate system for delivering oxygen is also required.

6. A recovery area must be provided that has available oxygen, adequate lighting, suction and electrical outlets. The recovery area may be the operating theater. A member of the staff must be able to observe the patient at all times during the recovery.

7. Except as otherwise provided in this subsection, ancillary equipment must include:

(a) A laryngoscope complete with an adequate selection of blades and spare batteries and bulbs;

(b) Endotracheal tubes and appropriate connectors;

(c) Oral airways;

(d) A tonsillar or pharyngeal suction tip adaptable to all office suction outlets;

(e) An endotracheal tube type forcep;

(f) A sphygmomanometer and stethoscope;

(g) An electrocardioscope and defibrillator;

(h) Adequate equipment for the establishment of an intravenous infusion; and

(i) A pulse oximeter.

(j) capnography monitor

8. When administering anesthesia or sedation to pediatric patients the dentist's office must meet the following minimum standards with regard to physical facilities and equipment:

(a) Pediatric Size Ambu Bag and Masks

(b) Pediatric BP Cuffs

(c) Laryngoscope with appropriate size blades

(d) Intubation tubes multiple sizes

(e) Aed with Peds paddles

(f) Braselow Tape

(g) Small Oral Air Ways

(h) Pediatric Bite Block

↪ A dentist's office inspected or evaluated for the issuance or renewal of a ~~conscious sedation~~ **minimal or moderate sedation** permit is not required to have the ancillary equipment described in paragraphs 7 (a), (b), (e) and (g), **or (j)**

NAC 631.2229 Inspections and evaluations: Records of patients. (NRS 631.190, 631.265)

A dentist's office inspected or evaluated for the issuance or renewal of a general anesthesia permit, ~~conscious sedation permit~~ **deep sedation, minimal or moderate sedation permit** or certificate of site approval must meet the following minimum standards with regard to the records of patients:

1. Adequate medical history and records of physical evaluation.

2. Records of the administration of anesthesia must include:

(a) The patient's blood pressure and pulse;

(b) The names of the drugs and the amounts administered;

(c) The length of the procedure; and

(d) Any complications of anesthesia.

NAC 631.2231 Inspections and evaluations: Emergency drugs. (NRS 631.190, 631.265)

Except as otherwise provided in this section, a dentist's office inspected or evaluated for the

issuance or renewal of a general anesthesia permit, ~~conscious sedation permit~~ *deep sedation, minimal or moderate sedation permit* or certificate of site approval must maintain emergency drugs of the following categories which must be immediately available for use on the patient:

1. Vasopressor;
2. Corticosteroid;
3. Bronchodilator;
4. Muscle relaxant;
5. Intravenous medication for the treatment of cardiopulmonary arrest;
6. Appropriate drug antagonist;
7. Antihistaminic;
8. Anticholinergic;
9. Antiarrhythmic;
10. Coronary artery vasodilator;
11. Anti-hypertensive; and
12. Anti-convulsive.

2. *When administering anesthesia or sedation to pediatric patients the dentist's office must meet the following minimum standards with regard to pediatric emergency drugs:*

(a) *Epi Pen Jr*

(b) *Adenosine*

(c) *Aminodarone*

(d) *Magnesium Sulfate*

(e) *Procainamide*

↳ A dentist's office that is inspected or evaluated for the issuance or renewal of a ~~conscious sedation~~ *minimal or moderate sedation* permit is not required to maintain the emergency drugs described in subsections 4, 5, 9 and 11.

NAC 631.2233 Inspections ~~and—evaluations:~~ Recommendations of inspectors ~~or evaluators;~~ ~~decision of Board.~~ (NRS 631.190, 631.265)

1. The persons performing an inspection ~~or evaluation~~ of a dentist's office for the issuance or renewal of a ~~general anesthesia site~~ permit *for the administration of general anesthesia* ~~or conscious sedation~~ *deep sedation, minimal or moderate sedation permit* shall grade the office as passing or failing. *No later than 72 hours* ~~Within 10 days~~ after completing the inspection ~~or evaluation~~, each inspector ~~or evaluator~~ shall report his or her recommendation for passing or failing to the ~~Board~~ *Executive Director*, setting forth the details supporting his or her conclusion. ~~The Board is not bound by these recommendations.~~

2. *If the site is in compliance with the requirements set forth in NAC 631.2227, 631.2229 and 631.2231, the Executive Director shall, without any further action by the Board, issue a written notice of the agents' findings to the licensed dentist.*

~~The Board will make the final determination whether the office has passed or failed the inspection or evaluation and will notify the dentist whose office is the subject of the inspection or evaluation, in writing, of its findings within 30 days after the Board receives a recommendation from each inspector or evaluator who inspected or evaluated the office.~~

3. If the site is not in compliance with the requirements set forth in NAC 631.2227, 631.2229 and 631.2231, the Executive Director shall, without any further action by the Board, issue a written notice which identifies the deficiencies and/ failure to the licensed dentist.

4. A dentist who has received a notice of failure from the Executive Director may, within 15 days after receiving the notice and rectifying the deficiencies, request in writing for a reinspection.

5. If the reinspection is granted by the Executive Director, it may be conducted by different persons in the manner set forth by NAC 631.2219 to 631.2233, inclusive, for an original inspection.

6. Pursuant to subsection 3 of NRS 233B.127, if a site inspection of an office or facility conducted pursuant to this section indicates that the public health, safety or welfare imperatively requires emergency action, the President of the Board may, without any further action by the Board, issue an order of summary suspension of the license of the licensed dentist pending proceedings for revocation or other action. An order for summary suspension issued by the President of the Board must contain findings of the exigent circumstances which warrant the issuance of the order for summary suspension. The President of the Board shall not participate in any further proceedings relating to the order.

NAC 631.2235 ~~Inspections and~~ Evaluations: Failure to pass; requests for reevaluations.
(NRS 631.190, 631.265)

1. The persons performing an evaluation of a dentist for the issuance or renewal of a permit *for the administration of general anesthesia, deep sedation, minimal or moderate sedation* shall grade the dentist as passing or failing. *No later than 72 hours* after completing the evaluation, each evaluator shall report his or her recommendation for passing or failing to the *Executive Director*, setting forth the details supporting his or her conclusion.

~~1. A dentist whose office the Board determines has failed the inspection or evaluation is not entitled to have a general anesthesia permit or conscious sedation permit issued or renewed~~

2. If the dentist is in compliance with the requirements set forth in NAC 631.2219 to 631.2233, the Board shall issue the permit for the administration of *general anesthesia, deep sedation, minimal or moderate sedation*.

3. If the dentist is not in compliance with the requirements set forth in NAC 631.2227, 631.2229 and 631.2231, the Executive Director shall, without any further action by the Board, issue a written notice which identifies the deficiencies and/ failure to the licensed dentist.

~~2.~~ 4. A dentist who has received a notice of failure from the ~~Board~~-Executive Director may, within 15 days after receiving the notice, request the Board in writing for a reevaluation. The request for a reevaluation must state specific grounds supporting it.

~~3.~~ 5. If the reevaluation is granted by the Board, it will be conducted by different persons in the manner set forth by NAC 631.2219 to 631.2233, inclusive, for an original evaluation.

~~4.~~ 6.-No dentist who has received a notice of failing an inspection or evaluation from the Board may request more than one reevaluation within any period of 12 months.

7. Pursuant to subsection 3 of NRS 233B.127, if an evaluation of a dentist for the administration of *general anesthesia, deep sedation, minimal or moderate sedation* is conducted pursuant to this section indicates that the public health, safety or welfare

imperatively requires emergency action, the President of the Board may, without any further action by the Board, issue an order of summary suspension of the license of the licensed dentist pending proceedings for revocation or other action. An order for summary suspension issued by the President of the Board must contain findings of the exigent circumstances which warrant the issuance of the order for summary suspension. The President of the Board shall not participate in any further proceedings relating to the order.

NAC 631.2236 Certificate of site approval: General requirements. ([NRS 631.190](#), [631.265](#))

1. A dentist who is licensed in this State may employ:

~~—(a) An anesthesiologist who is licensed as such by the State of Nevada; or~~

(b) A dentist who is licensed in this State and who holds a general anesthesia permit, ~~or conscious sedation~~ *deep sedation, minimal or moderate sedation* permit,
→ to administer general anesthesia, deep sedation or ~~conscious sedation~~ *minimal or moderate sedation*, as appropriate, to his or her patients at his or her office if he or she holds a certificate of site approval issued pursuant to this section.

2. A dentist who is licensed in this State and who desires to receive or renew a certificate of site approval must submit to the Board:

(a) An application for a certificate or for the renewal of a certificate, in a form approved by the Board;

(b) The fee for the inspection of a facility which is established by the Board pursuant to [NRS 631.345](#); and

(c) Written documentation which demonstrates that the ~~anesthesiologist or~~ dentist who is to be employed to administer the general anesthesia, deep sedation or ~~conscious sedation~~ *minimal or moderate sedation* holds an appropriate ~~license or~~ permit issued by the ~~appropriate~~ board in this State to administer such anesthesia or sedation ~~and, if the person to be employed is an anesthesiologist, that the anesthesiologist maintains unrestricted active staff privileges within the department of anesthesiology at a hospital or surgical center approved by The Joint Commission.~~

3. Upon receipt of an application pursuant to this section, the Board will appoint one of its members or a representative of the Board to inspect the office of the applicant to determine whether the office complies with the requirements set forth in [NAC 631.2227](#), [631.2229](#) and [631.2231](#). The person conducting the inspection shall report his or her determination to the Board.

4. If the person conducting the inspection determines that the office of the applicant complies with the requirements of [NAC 631.2227](#), [631.2229](#) and [631.2231](#) and the applicant has otherwise met the requirements of this section, the Executive Director shall issue a certificate of site approval to the applicant.

5. If the person conducting the inspection determines that the office of the applicant fails to comply with the requirements of [NAC 631.2227](#), [631.2229](#) and [631.2231](#), the person conducting the inspection shall report his or her recommendations of failing to the Executive Director of the Board as set forth in [NAC 631.2233](#) to [NAC 631.2235](#)

5. A holder of a certificate of site approval shall maintain the information described in paragraph (c) of subsection 2 at his or her office at all times.

6. Each certificate of site approval issued by the Board must be renewed annually or biennially, as applicable, based on the renewal period set forth in [NRS 631.330](#) for the type of license held by the holder of the certificate.

7. The Board may reinspect the office of the holder of a certificate of site approval at any time.

NAC 631.2237 Procedures required before administration of anesthetic or sedation. ([NRS 631.190](#), [631.265](#))

1. Written consent of the patient must be obtained before the administration of a general anesthetic, deep sedation or ~~conscious sedation~~ *minimal or moderate sedation*, unless the dentist determines that an emergency situation exists in which delaying the procedure to obtain the consent would likely cause permanent injury to the patient. If the patient is a minor, the consent must be obtained from his or her parent or legal guardian.

2. A medical history must be taken before the administration of a general anesthetic, deep sedation or ~~conscious sedation~~ *minimal or moderate sedation*. A patient should be asked to describe any current medical conditions or treatments, including, without limitation, medications, drug allergies, impending or past operations and pregnancy, and to give other information that may be helpful to the person administering the anesthetic or sedation. The dentist is not required to make a complete medical examination of the patient and draw medical diagnostic conclusions. If a dentist suspects a medical problem and calls in a physician for an examination and evaluation, he or she may then rely upon that conclusion and diagnosis. Questions asked of and answers received from the patient must be permanently recorded and signed by the patient before the administration of any general anesthetic, deep sedation or ~~conscious sedation~~ *minimal or moderate sedation*, and this record must be a permanent part of the patient's record of treatment.

NAC 631.2239 Properly equipped facility required; qualifications of auxiliary personnel. ([NRS 631.190](#), [631.265](#))

1. A dentist using general anesthesia, deep sedation, ~~or conscious sedation~~ *minimal or moderate sedation* shall maintain a properly equipped facility for the administration of the anesthesia or sedation which is staffed with supervised auxiliary personnel who are capable of reasonably handling procedures, problems and emergencies incident thereto.

2. A dentist using general anesthesia, deep sedation, ~~or conscious sedation~~ *minimal or moderate sedation* shall ensure that his or her auxiliary personnel are certified in basic cardiopulmonary resuscitation by the American Heart Association.

NAC 631.224 Employment of certified registered nurse anesthetist. ([NRS 631.190](#), [631.265](#))

1. Any dentist who holds a general anesthesia permit pursuant to the provisions of [NAC 631.2211](#) to [631.2256](#), inclusive, may employ a certified registered nurse anesthetist to administer the general anesthesia, deep sedation, ~~or conscious sedation~~ *minimal or moderate sedation* to a patient if the dentist is physically present and directly supervises the administration of the general anesthesia, deep sedation, ~~or conscious sedation~~ *minimal or moderate sedation* to the patient. The holder of the permit must maintain at his or her office evidence in writing that the certified registered nurse anesthetist is licensed to practice in the State of Nevada and maintains unrestricted active staff privileges within the department of anesthesiology at a hospital or surgical center which is certified by The Joint Commission.

2. Except as otherwise provided in [NAC 631.2236](#), a dentist who does not hold a general anesthesia permit may not allow any person to administer general anesthesia, deep sedation, ~~or~~

~~conscious sedation~~ *minimal or moderate sedation* to his or her patients unless the treatment is rendered within a facility approved by The Joint Commission.

NAC 631.2241 Report of injuries to patients. ([NRS 631.190](#), [631.265](#)) Each holder of a general anesthesia permit, ~~conscious sedation~~, *deep sedation, minimal or moderate sedation* permit or certificate of site approval shall submit to the Board a complete report regarding any mortality or unusual incident which occurs outside a facility accredited by The Joint Commission and produces permanent injury to a patient or requires the hospitalization of a patient, as a direct result of the administration of general anesthesia, deep sedation ~~or conscious sedation~~, *minimal or moderate sedation*. The report must be submitted within 30 days after the date of the incident. If a dentist fails to report any incident as required by this section, his or her permit may be revoked.

NAC 631.2254 Temporary permits. ([NRS 631.190](#), [631.265](#))

1. The Board may grant a temporary permit to administer general anesthesia and deep sedation or a temporary permit to administer ~~conscious sedation~~ *minimal or moderate sedation* to an applicant who meets the qualifications for a permit to administer that type of anesthesia or sedation pursuant to [NAC 631.2213](#).

2. A temporary permit is valid for not more than 90 days, but the Board may, in any case it deems appropriate, grant a 90-day extension of the permit.

3. The Board may require the holder of a temporary permit to pass an on-site inspection as a condition of retaining the permit. If the holder fails the inspection, his or her permit will be revoked. In case of revocation, the holder of a temporary permit may apply to be reinspected in accordance with the procedures set forth in [NAC 631.2235](#).

NAC 631.2256 Continuing education required. ([NRS 631.190](#), [631.265](#), [631.342](#)) Every 2 years, the holder of a general anesthesia permit ~~or conscious sedation~~, permit must complete at least 3 hours in courses of study that specifically relate to anesthesia or sedation, as applicable, before the permit may be renewed. This training will be credited toward any continuing education required by [NAC 631.173](#).

ADA
GUIDELINES FOR TEACHING PAIN CONTROL AND SEDATION TO
DENTISTS AND DENTAL STUDENTS

Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students

I. INTRODUCTION

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

Anxiety and pain control can be defined as the application of various physical, chemical and psychological modalities to the prevention and treatment of preoperative, operative and postoperative patient anxiety and pain to allow dental treatment to occur in a safe and effective manner. It involves all disciplines of dentistry and, as such, is one of the most important aspects of dental education. The intent of these *Guidelines* is to provide direction for the teaching of pain control and sedation to dentists and can be applied at all levels of dental education from predoctoral through continuing education. They are designed to teach initial competency in pain control and minimal and moderate sedation techniques.

These *Guidelines* recognize that many dentists have acquired a high degree of competency in the use of anxiety and pain control techniques through a combination of instruction and experience. It is assumed that this has enabled these teachers and practitioners to meet the educational criteria described in this document.

It is not the intent of the *Guidelines* to fit every program into the same rigid educational mold. This is neither possible nor desirable. There must always be room for innovation and improvement. They do, however, provide a reasonable measure of program acceptability, applicable to all institutions and agencies engaged in predoctoral and continuing education.

The curriculum in anxiety and pain control is a continuum of educational experiences that will extend over several years of the predoctoral program. It should provide the dental student with the knowledge and skills necessary to provide minimal sedation to alleviate anxiety and control pain without inducing detrimental physiological or psychological side effects. Dental schools whose goal is to have predoctoral students achieve competency in techniques such as local anesthesia and nitrous oxide inhalation and minimal sedation must meet all of the goals, prerequisites, didactic content, clinical experiences, faculty and facilities, as described in these *Guidelines*.

Techniques for the control of anxiety and pain in dentistry should include both psychological and pharmacological modalities. Psychological strategies should include simple relaxation techniques for the anxious patient and more comprehensive behavioral techniques to control pain. Pharmacological strategies should include not only local anesthetics but also sedatives, analgesics and other useful agents. Dentists should learn indications and techniques for administering these drugs enterally, parenterally and by inhalation as supplements to local anesthesia.

The predoctoral curriculum should provide instruction, exposure and/or experience in anxiety and pain control, including minimal and moderate sedation. The predoctoral program must also provide the knowledge and skill to enable students to recognize and manage any emergencies that might arise as a consequence of treatment. Predoctoral

dental students must complete a course in Basic Life Support for the Healthcare Provider. Though Basic Life Support courses are available online, any course taken online should be followed up with a hands-on component and be approved by the American Heart Association or the American Red Cross.

Local anesthesia is the foundation of pain control in dentistry. Although the use of local anesthetics in dentistry has a long record of safety, dentists must be aware of the maximum safe dosage limit for each patient, since large doses of local anesthetics may increase the level of central nervous system depression with sedation. The use of minimal and moderate sedation requires an understanding of local anesthesia and the physiologic and pharmacologic implications of the local anesthetic agents when combined with the sedative agents

The knowledge, skill and clinical experience required for the safe administration of deep sedation and/or general anesthesia are beyond the scope of predoctoral and continuing education programs. Advanced education programs that teach deep sedation and/or general anesthesia to competency have specific teaching requirements described in the Commission on Dental Accreditation requirements for those advanced programs and represent the educational and clinical requirements for teaching deep sedation and/or general anesthesia in dentistry.

The objective of educating dentists to utilize pain control, sedation and general anesthesia is to enhance their ability to provide oral health care. The American Dental Association urges dentists to participate regularly in continuing education update courses in these modalities in order to remain current.

All areas in which local anesthesia and sedation are being used must be properly equipped with suction, physiologic monitoring equipment, a positive pressure oxygen delivery system suitable for the patient being treated and emergency drugs. Protocols for the management of emergencies must be developed and training programs held at frequent intervals.

II. DEFINITIONS

Methods of Anxiety and Pain Control

analgesia — the diminution or elimination of pain.

conscious sedation¹ — a minimally depressed level of consciousness that retains the patient's ability to independently and continuously maintain an airway and respond appropriately to physical stimulation or verbal command and that is produced by a pharmacological or non-pharmacological method or a combination thereof.

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. Further, patients whose only response is reflex withdrawal from repeated painful stimuli would not be considered to be in a state of conscious sedation.

combination inhalation-enteral conscious sedation (combined conscious sedation) — conscious sedation using inhalation and enteral agents.

1 Parenteral conscious sedation may be achieved with the administration of a single agent or by the administration of more than one agent.

When the intent is anxiolysis only, and the appropriate dosage of agents is administered, then the definition of enteral and/or combination inhalation-enteral conscious sedation (combined conscious sedation) does not apply.

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 always 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.

minimal sedation — 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.²

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. Further, patients whose only response is reflex withdrawal from repeated painful stimuli would not be considered to be in a state of minimal sedation.

When the intent is minimal sedation for adults, the appropriate initial dosing of a single enteral drug is no more than the maximum recommended dose (MRD) of a drug that can be prescribed for unmonitored home use.

The use of preoperative sedatives for children (aged 12 and under) prior to arrival in the dental office, except in extraordinary situations, must be avoided due to the risk of unobserved respiratory obstruction during transport by untrained individuals.

Children (aged 12 and under) can become moderately sedated despite the intended level of minimal sedation; should this occur, the guidelines for moderate sedation apply.

For children 12 years of age and under, 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.*

Nitrous oxide/oxygen may be used in combination with a single enteral drug in minimal sedation.

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

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.

incremental dosing — administration of multiple doses of a drug until a desired effect is reached, but not to exceed the maximum recommended dose (MRD).

supplemental dosing — during minimal sedation, supplemental dosing is a single additional dose of the initial dose of the initial drug that may be necessary for prolonged procedures. The supplemental dose should not exceed one-half of the initial total dose and should not be administered until the dentist has determined the clinical half-life of the initial dosing has passed. The total aggregate dose must not exceed 1.5x the MRD on the day of treatment.

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.³

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 administration of moderate and deeper levels of sedation:

titration — administration of incremental doses of a 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 — 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.³

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.³

3 Excerpted from *Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia*, 2004, of the American Society of Anesthesiologists (ASA). A copy of the full text can be obtained from ASA, 520 N. Northwest Highway, Park Ridge, IL 60068-2573.

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.³

For all levels of sedation, the practitioner 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.

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

qualified dentist — meets the educational requirements for the appropriate level of sedation in accordance with *Section III* of these *Guidelines*, or a dentist providing sedation and anesthesia in compliance with their state rules and/or regulations prior to adoption of this document.

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, doses and physiologic data obtained during patient monitoring.

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

Levels of Knowledge

familiarity — a simplified knowledge for the purpose of orientation and recognition of general principles.

in-depth — a thorough knowledge of concepts and theories for the purpose of critical analysis and the synthesis of more complete understanding (highest level of knowledge).

Levels of Skill

exposed — the level of skill attained by observation of or participation in a particular activity.

competent — displaying special skill or knowledge derived from training and experience.

proficient — the level of skill attained when a particular activity is accomplished with repeated quality and a more efficient utilization of time (highest level of skill).

American Society of Anesthesiologists (ASA) Patient Physical Status Classification⁴

ASA I — A normal healthy patient.

ASA II — A patient with mild systemic disease.

ASA III — A patient with severe systemic disease.

ASA IV — A patient with severe systemic disease that is a constant threat to life.

ASA V — A moribund patient who is not expected to survive without the operation.

ASA VI — A declared brain-dead patient whose organs are being removed for donor purposes.

E — Emergency operation of any variety (used to modify one of the above classifications, i.e., ASA IIIE).

Education Courses

Education may be offered at different levels (competency, update, survey courses and advanced education programs). A description of these different levels follows:

- 1. Competency Courses** are designed to meet the needs of dentists who wish to become knowledgeable and proficient in the safe and effective administration of local anesthesia, minimal and moderate sedation. They consist of lectures, demonstrations and sufficient clinical participation to assure the faculty that the dentist understands the procedures taught and can safely and effectively apply them so that mastery of the subject is achieved. Faculty must assess and document the dentist's

⁴ ASA Physical Status Classification System is reprinted with permission of the American Society of Anesthesiologists, 520 N. Northwest Highway, Park Ridge, IL 60068-2573.

III. TEACHING PAIN CONTROL

competency upon successful completion of such training. To maintain competency, periodic update courses must be completed.

2. **Update Courses** are designed for persons with previous training. They are intended to provide a review of the subject and an introduction to recent advances in the field. They should be designed didactically and clinically to meet the specific needs of the participants. Participants must have completed previous competency training (equivalent, at a minimum, to the competency course described in this document) and have current experience to be eligible for enrollment in an update course.
3. **Survey Courses** are designed to provide general information about subjects related to pain control and sedation. Such courses should be didactic and not clinical in nature, since they are not intended to develop clinical competency.
4. **Advanced Education Courses** are a component of an advanced dental education program, accredited by the ADA Commission on Dental Accreditation in accord with the *Accreditation Standards* for advanced dental education programs. These courses are designed to prepare the graduate dentist or postdoctoral student in the most comprehensive manner to be knowledgeable and proficient in the safe and effective administration of minimal, moderate and deep sedation and general anesthesia.

These *Guidelines* present a basic overview of the recommendations for teaching pain control.

A. General Objectives: Upon completion of a predoctoral curriculum in pain control the dentist must:

1. Have an in-depth knowledge of those aspects of anatomy, physiology, pharmacology and psychology involved in the use of various anxiety and pain control methods;
2. Be competent in evaluating the psychological and physical status of the patient, as well as the magnitude of the operative procedure, in order to select the proper regimen;
3. Be competent in monitoring vital functions;
4. Be competent in prevention, recognition and management of related complications;
5. Be familiar with the appropriateness of and the indications for medical consultation or referral;
6. Be competent in the maintenance of proper records with accurate chart entries recording medical history, physical examination, vital signs, drugs administered and patient response.

B. Pain Control Curriculum Content:

1. Philosophy of anxiety and pain control and patient management, including the nature and purpose of pain
2. Review of physiologic and psychologic aspects of anxiety and pain
3. Review of airway anatomy and physiology
4. Physiologic monitoring

- a. Observation
 - (1) Central nervous system
 - (2) Respiratory system
 - a. Oxygenation
 - b. Ventilation
 - (3) Cardiovascular system
 - b. Monitoring equipment
5. Pharmacologic aspects of anxiety and pain control
- a. Routes of drug administration
 - b. Sedatives and anxiolytics
 - c. Local anesthetics
 - d. Analgesics and antagonists
 - e. Adverse side effects
 - f. Drug interactions
 - g. Drug abuse
6. Control of preoperative and operative anxiety and pain
- a. Patient evaluation
 - (1) Psychological status
 - (2) ASA physical status
 - (3) Type and extent of operative procedure
 - b. Nonpharmacologic methods
 - (1) Psychological and behavioral methods
 - (a) Anxiety management
 - (b) Relaxation techniques
 - (c) Systematic desensitization
 - (2) Interpersonal strategies of patient management
 - (3) Hypnosis
 - (4) Electronic dental anesthesia
 - (5) Acupuncture/Acupressure
 - (6) Other
 - c. Local anesthesia
 - (1) Review of related anatomy, and physiology

- (2) Pharmacology
 - (a) Dosing
 - (b) Toxicity
 - (c) Selection of agents
- (3) Techniques of administration
 - (a) Topical
 - (b) Infiltration (supraperiosteal)
 - (c) Nerve block — maxilla—to include:
 - (i) Posterior superior alveolar
 - (ii) Infraorbital
 - (iii) Nasopalatine
 - (iv) Greater palatine
 - (v) Maxillary (2nd division)
 - (vi) Other blocks
 - (d) Nerve block — mandible—to include:
 - (i) Inferior alveolar-lingual
 - (ii) Mental-incisive
 - (iii) Buccal
 - (iv) Gow-Gates
 - (v) Closed mouth
 - (e) Alternative injections—to include:
 - (i) Periodontal ligament
 - (ii) Intraosseous

d. Prevention, recognition and management of complications and emergencies

C. Sequence of Pain Control Didactic and Clinical Instruction: Beyond the basic didactic instruction in local anesthesia, additional time should be provided for demonstrations and clinical practice of the injection techniques. The teaching of other methods of anxiety and pain control, such as the use of analgesics and enteral, inhalation and parenteral sedation, should be coordinated with a course in pharmacology. By this time the student also will have developed a better understanding of patient evaluation and the problems related to prior patient care. As part of this instruction, the student should be taught the techniques of venipuncture and physiologic monitoring. Time should be included for demonstration of minimal and moderate sedation techniques.

Following didactic instruction in minimal and moderate sedation, the student must receive sufficient clinical experience to demonstrate competency in those techniques

IV. TEACHING
ADMINISTRATION
OF MINIMAL SEDA-
TION

in which the student is to be certified. It is understood that not all institutions may be able to provide instruction to the level of clinical competence in pharmacologic sedation modalities to all students. The amount of clinical experience required to achieve competency will vary according to student ability, teaching methods and the anxiety and pain control modality taught.

Clinical experience in minimal and moderate sedation techniques should be related to various disciplines of dentistry and not solely limited to surgical cases. Typically, such experience will be provided in managing healthy adult patients. The sedative care of pediatric patients and those with special needs requires advanced didactic and clinical training.

Throughout both didactic and clinical instruction in anxiety and pain control, psychological management of the patient should also be stressed. Instruction should emphasize that the need for sedative techniques is directly related to the patient's level of anxiety, cooperation, medical condition and the planned procedures.

D. Faculty: Instruction must be provided by qualified faculty for whom anxiety and pain control are areas of major proficiency, interest and concern.

E. Facilities: Competency courses must be presented where adequate facilities are available for proper patient care, including drugs and equipment for the management of emergencies.

The faculty responsible for curriculum in minimal sedation techniques must be familiar with the ADA Policy Statement: *Guidelines for the Use of Sedation and General Anesthesia by Dentists*, and the Commission on Dental Accreditation's *Accreditation Standards* for dental education programs.

These *Guidelines* present a basic overview of the recommendations for teaching minimal sedation. These include courses in nitrous oxide/oxygen sedation, enteral sedation, and combined inhalation/enteral techniques.

General Objectives: Upon completion of a competency course in minimal sedation, the dentist must be able to:

1. Describe the adult and pediatric anatomy and physiology of the respiratory, cardiovascular and central nervous systems, as they relate to the above techniques.
2. Describe the pharmacological effects of drugs.
3. Describe the methods of obtaining a medical history and conduct an appropriate physical examination.
4. Apply these methods clinically in order to obtain an accurate evaluation.
5. Use this information clinically for ASA classification and risk assessment.
6. Choose the most appropriate technique for the individual patient.
7. Use appropriate physiologic monitoring equipment.
8. Describe the physiologic responses that are consistent with minimal sedation.
9. Understand the sedation/general anesthesia continuum.

Inhalation Sedation (Nitrous Oxide/Oxygen)

A. Inhalation Sedation Course Objectives: Upon completion of a competency course in inhalation sedation techniques, the dentist must be able to:

1. Describe the basic components of inhalation sedation equipment.
2. Discuss the function of each of these components.
3. List and discuss the advantages and disadvantages of inhalation sedation.
4. List and discuss the indications and contraindications of inhalation sedation.
5. List the complications associated with inhalation sedation.
6. Discuss the prevention, recognition and management of these complications.
7. Administer inhalation sedation to patients in a clinical setting in a safe and effective manner.
8. Discuss the abuse potential, occupational hazards and other untoward effects of inhalation agents.

B. Inhalation Sedation Course Content:

1. Historical, philosophical and psychological aspects of anxiety and pain control.
2. Patient evaluation and selection through review of medical history taking, physical diagnosis and psychological considerations.
3. Definitions and descriptions of physiological and psychological aspects of anxiety and pain.
4. Description of the stages of drug-induced central nervous system depression through all levels of consciousness and unconsciousness, with special emphasis on the distinction between the conscious and the unconscious state.
5. Review of pediatric and adult respiratory and circulatory physiology and related anatomy.
6. Pharmacology of agents used in inhalation sedation, including drug interactions and incompatibilities.
7. Indications and contraindications for use of inhalation sedation.
8. Review of dental procedures possible under inhalation sedation.
9. Patient monitoring using observation and monitoring equipment, with particular attention to vital signs and reflexes related to pharmacology of nitrous oxide.
10. Importance of maintaining proper records with accurate chart entries recording medical history, physical examination, vital signs, drugs and doses administered and patient response.
11. Prevention, recognition and management of complications and life-threatening situations.
12. Administration of local anesthesia in conjunction with inhalation sedation techniques.
13. Description and use of inhalation sedation equipment.
14. Introduction to potential health hazards of trace anesthetics and proposed techniques for limiting occupational exposure.
15. Discussion of abuse potential.

C. Inhalation Sedation Course Duration: While length of a course is only one of the many factors to be considered in determining the quality of an educational program, the course should be a minimum of *14 hours*, including a clinical component during which competency in inhalation sedation technique is achieved. The inhalation sedation course most often is completed as a part of the predoctoral dental education program. However, the course may be completed in a postdoctoral continuing education competency course.

D. Participant Evaluation and Documentation of Inhalation Sedation Instruction: Competency courses in inhalation sedation techniques must afford participants with sufficient clinical experience to enable them to achieve competency. This experience must be provided under the supervision of qualified faculty and must be evaluated. The course director must certify the competency of participants upon satisfactory completion of training. Records of the didactic instruction and clinical experience, including the number of patients treated by each participant must be maintained and available.

E. Faculty: The course should be directed by a dentist or physician qualified by experience and training. This individual should have had at least three years of experience, including the individual's formal postdoctoral training in anxiety and pain control. In addition, the participation of highly qualified individuals in related fields, such as anesthesiologists, pharmacologists, internists, and cardiologists and psychologists, should be encouraged.

A participant-faculty ratio of not more than ten-to-one when inhalation sedation is being used allows for adequate supervision during the clinical phase of instruction; a one-to-one ratio is recommended during the early state of participation.

The faculty should provide a mechanism whereby the participant can evaluate the performance of those individuals who present the course material.

F. Facilities: Competency courses must be presented where adequate facilities are available for proper patient care, including drugs and equipment for the management of emergencies.

Enteral and/or Combination Inhalation-enteral Minimal Sedation

A. Enteral and/or Combination Inhalation-enteral Minimal Sedation Course

Objectives: Upon completion of a competency course in enteral and/or combination inhalation-enteral minimal sedation techniques, the dentist must be able to:

1. Describe the basic components of inhalation sedation equipment.
2. Discuss the function of each of these components.
3. List and discuss the advantages and disadvantages of enteral and/or combination inhalation-enteral minimal sedation (combined minimal sedation).
4. List and discuss the indications and contraindications for the use of enteral and/or combination inhalation-enteral minimal sedation (combined minimal sedation).
5. List the complications associated with enteral and/or combination inhalation-enteral minimal sedation (combined minimal sedation).
6. Discuss the prevention, recognition and management of these complications.

7. Administer enteral and/or combination inhalation-enteral minimal sedation (combined minimal sedation) to patients in a clinical setting in a safe and effective manner.
8. Discuss the abuse potential, occupational hazards and other effects of enteral and inhalation agents.
9. Discuss the pharmacology of the enteral and inhalation drugs selected for administration.
10. Discuss the precautions, contraindications and adverse reactions associated with the enteral and inhalation drugs selected.
11. Describe a protocol for management of emergencies in the dental office and list and discuss the emergency drugs and equipment required for management of life-threatening situations.
12. Demonstrate the ability to manage life-threatening emergency situations, including current certification in Basic Life Support for Healthcare Providers.
13. Discuss the pharmacological effects of combined drug therapy, their implications and their management. Nitrous oxide/oxygen when used in combination with sedative agent(s) may produce minimal, moderate, deep sedation or general anesthesia.

B. Enteral and/or Combination Inhalation-Enteral Minimal Sedation Course Content:

1. Historical, philosophical and psychological aspects of anxiety and pain control.
2. Patient evaluation and selection through review of medical history taking, physical diagnosis and psychological profiling.
3. Definitions and descriptions of physiological and psychological aspects of anxiety and pain.
4. Description of the stages of drug-induced central nervous system depression through all levels of consciousness and unconsciousness, with special emphasis on the distinction between the conscious and the unconscious state.
5. Review of pediatric and adult respiratory and circulatory physiology and related anatomy.
6. Pharmacology of agents used in enteral and/or combination inhalation-enteral minimal sedation, including drug interactions and incompatibilities.
7. Indications and contraindications for use of enteral and/or combination inhalation-enteral minimal sedation (combined minimal sedation).
8. Review of dental procedures possible under enteral and/or combination inhalation-enteral minimal sedation).
9. Patient monitoring using observation, monitoring equipment, with particular attention to vital signs and reflexes related to consciousness.
10. 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 including local anesthetics, doses, and monitored physiological parameters.

11. Prevention, recognition and management of complications and life-threatening situations.
12. Administration of local anesthesia in conjunction with enteral and/or combination inhalation-enteral minimal sedation techniques.
13. Description and use of inhalation sedation equipment.
14. Introduction to potential health hazards of trace anesthetics and proposed techniques for limiting occupational exposure.
15. Discussion of abuse potential.

C. Enteral and/or Combination Inhalation-enteral Minimal Sedation Course

Duration: Participants must be able to document current certification in Basic Life Support for Healthcare Providers and have completed a nitrous oxide competency course to be eligible for enrollment in this course. While length of a course is only one of the many factors to be considered in determining the quality of an educational program, the course should include a minimum of *16 hours*, plus clinically-oriented experiences during which competency in enteral and/or combined inhalation-enteral minimal sedation techniques is demonstrated. Clinically-oriented experiences may include group observations on patients undergoing enteral and/or combination inhalation-enteral minimal sedation. Clinical experience in managing a compromised airway is critical to the prevention of life-threatening emergencies. The faculty should schedule participants to return for additional clinical experience if competency has not been achieved in the time allotted. The educational course may be completed in a predoctoral dental education curriculum or a postdoctoral continuing education competency course.

These *Guidelines* are not intended for the management of enteral and/or combination inhalation-enteral minimal sedation in children, which requires additional course content and clinical learning experience.

D. Participant Evaluation and Documentation of Instruction: Competency courses in combination inhalation-enteral minimal sedation techniques must afford participants with sufficient clinical understanding to enable them to achieve competency. The course director must certify the competency of participants upon satisfactory completion of the course. Records of the course instruction must be maintained and available.

E. Faculty: The course should be directed by a dentist or physician qualified by experience and training. This individual should have had at least three years of experience, including the individual's formal postdoctoral training in anxiety and pain control. Dental faculty with broad clinical experience in the particular aspect of the subject under consideration should participate. In addition, the participation of highly qualified individuals in related fields, such as anesthesiologists, pharmacologists, internists, and cardiologists and psychologists, should be encouraged. The faculty should provide a mechanism whereby the participant can evaluate the performance of those individuals who present the course material.

F. Facilities: Competency courses must be presented where adequate facilities are available for proper patient care, including drugs and equipment for the management of emergencies.

V. TEACHING
ADMINISTRATION OF
MODERATE SEDATION

These *Guidelines* present a basic overview of the requirements for a competency course in moderate sedation. These include courses in enteral moderate sedation and parenteral moderate sedation. The teaching guidelines contained in this section on moderate sedation differ slightly from documents in medicine to reflect the differences in delivery methodologies and practice environment in dentistry. For this reason, separate teaching guidelines have been developed for moderate enteral and moderate parenteral sedation.

A. Course Objectives: Upon completion of a course in moderate sedation, the dentist must be able to:

1. List and discuss the advantages and disadvantages of moderate sedation.
2. Discuss the prevention, recognition and management of complications associated with moderate sedation.
3. Administer moderate sedation to patients in a clinical setting in a safe and effective manner.
4. Discuss the abuse potential, occupational hazards and other untoward effects of the agents utilized to achieve moderate sedation.
5. Describe and demonstrate the technique of intravenous access, intramuscular injection and other parenteral techniques.
6. Discuss the pharmacology of the drug(s) selected for administration.
7. Discuss the precautions, indications, contraindications and adverse reactions associated with the drug(s) selected.
8. Administer the selected drug(s) to dental patients in a clinical setting in a safe and effective manner.
9. List the complications associated with techniques of moderate sedation.
10. Describe a protocol for management of emergencies in the dental office and list and discuss the emergency drugs and equipment required for the prevention and management of emergency situations.
11. Discuss principles of advanced cardiac life support or an appropriate dental sedation/anesthesia emergency course equivalent.
12. Demonstrate the ability to manage emergency situations.

B. Moderate Sedation Course Content:

1. Historical, philosophical and psychological aspects of anxiety and pain control.
2. Patient evaluation and selection through review of medical history taking, physical diagnosis and psychological considerations.
3. Definitions and descriptions of physiological and psychological aspects of anxiety and pain.
4. Description of the sedation anesthesia continuum, with special emphasis on the distinction between the conscious and the unconscious state.
5. Review of pediatric and adult respiratory and circulatory physiology and related anatomy.
6. Pharmacology of local anesthetics and agents used in moderate sedation, including drug interactions and contraindications.

7. Indications and contraindications for use of moderate sedation.
8. Review of dental procedures possible under moderate sedation.
9. Patient monitoring using observation and monitoring equipment, with particular attention to vital signs and reflexes related to consciousness.
10. 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 including local anesthetics, doses, and monitored physiological parameters.
11. Prevention, recognition and management of complications and emergencies.
12. Description and use of moderate sedation monitors and equipment.
13. Discussion of abuse potential.
14. Intravenous access: anatomy, equipment and technique.
15. Prevention, recognition and management of complications of venipuncture and other parenteral techniques.
16. Description and rationale for the technique to be employed.
17. Prevention, recognition and management of systemic complications of moderate sedation, with particular attention to airway maintenance and support of the respiratory and cardiovascular systems.

C. Moderate Enteral Sedation Course Duration: A minimum of *24 hours* of instruction, plus management of at least *10 adult case experiences* by the enteral and/or enteral-nitrous oxide/oxygen route are required to achieve competency. These ten cases must include at least three live clinical dental experiences managed by participants in groups no larger than five. The remaining cases may include simulations and/or video presentations, but must include one experience in returning (rescuing) a patient from deep to moderate sedation. Participants combining enteral moderate sedation with nitrous oxide-oxygen must have first completed a nitrous oxide competency course.

Participants should be provided supervised opportunities for clinical experience to demonstrate competence in airway management. Clinical experience will be provided in managing healthy adult patients; **this course in moderate enteral sedation is not designed for the management of children (aged 12 and under)**. Additional supervised clinical experience is necessary to prepare participants to manage medically compromised adults and special needs patients. This course in moderate enteral sedation does not result in competency in moderate parenteral sedation. The faculty should schedule participants to return for additional didactic or clinical exposure if competency has not been achieved in the time allotted.

Moderate Parenteral Sedation Course Duration: A minimum of *60 hours* of instruction, plus management of *at least 20 patients* by the intravenous route per participant, is required to achieve competency in moderate sedation techniques. Participants combining parenteral moderate sedation with nitrous oxide-oxygen must have first completed a nitrous oxide competency course.

Clinical experience in managing a compromised airway is critical to the prevention of emergencies. Participants should be provided supervised opportunities for clinical experience to demonstrate competence in management of the airway. Typically, clinical experience will be provided in managing healthy adult patients.

Additional supervised clinical experience is necessary to prepare participants to manage children (aged 12 and under) and medically compromised adults. Successful completion of this course does result in clinical competency in moderate parenteral sedation. The faculty should schedule participants to return for additional clinical experience if competency has not been achieved in the time allotted.

D. Participant Evaluation and Documentation of Instruction: Competency courses in moderate sedation techniques must afford participants with sufficient clinical experience to enable them to achieve competency. This experience must be provided under the supervision of qualified faculty and must be evaluated. The course director must certify the competency of participants upon satisfactory completion of training in each moderate sedation technique, including instruction, clinical experience and airway management. Records of the didactic instruction and clinical experience, including the number of patients managed by each participant in each anxiety and pain control modality must be maintained and available for review.

E. Faculty: The course should be directed by a dentist or physician qualified by experience and training. This individual should have had at least three years of experience, including formal postdoctoral training in anxiety and pain control. Dental faculty with broad clinical experience in the particular aspect of the subject under consideration should participate. In addition, the participation of highly qualified individuals in related fields, such as anesthesiologists, pharmacologists, internists, cardiologists and psychologists, should be encouraged.

A participant-faculty ratio of not more than five-to-one when moderate enteral sedation is being taught allows for adequate supervision during the clinical phase of instruction. A participant-faculty ratio of not more than three-to-one when moderate parenteral sedation is being taught allows for adequate supervision during the clinical phase of instruction; a one-to-one ratio is recommended during the early stage of participation.

The faculty should provide a mechanism whereby the participant can evaluate the performance of those individuals who present the course material.

F. Facilities: Competency courses in moderate sedation must be presented where adequate facilities are available for proper patient care, including drugs and equipment for the management of emergencies. These facilities may include dental and medical schools/offices, hospitals and surgical centers.

V. ADDITIONAL SOURCES OF INFORMATION

American Dental Association. Example of a time oriented anesthesia record at ADA.org.

American Academy of Pediatric Dentistry (AAPD). *Guidelines for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures: An Update*. Developed through a collaborative effort between the American Academy of Pediatrics and the AAPD. Available at www.aapd.org/policies.

American Academy of Periodontology (AAP). ~~*Guidelines: In-Office Use of Conscious Sedation in Periodontics*~~. Available at www.perio.org/resources-products/posppr3-4.html. **The AAP rescinded this policy in 2008.**

American Association of Oral and Maxillofacial Surgeons (AAOMS). *Parameters and Pathways: Clinical Practice Guidelines for Oral and Maxillofacial Surgery (AAOMS ParPath 01) Anesthesia in Outpatient Facilities*. Contact AAOMS at 847.678.6200 or visit www.aaoms.org/index.php.

American Association of Oral and Maxillofacial Surgeons (AAOMS). *Office Anesthesia Evaluation Manual 7th Edition*. Contact AAOMS at 847.678.6200 or visit www.aaoms.org/index.php.

American Society of Anesthesiologists (ASA). *Practice Guidelines for Preoperative Fasting and the Use of Pharmacological Agents to Reduce the Risk of Pulmonary Aspiration: Application to Healthy Patients Undergoing Elective Procedures*. Available at <https://ecommerce.asahq.org/p-178-practice-guidelines-for-preoperative-fasting.aspx>.

American Society of Anesthesiologists (ASA). *Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists*. Available at www.asahq.org/Home/For-Members/Practice-Management/Practice-Parameters#sedation.

The ASA has other anesthesia resources that might be of interest to dentists. For more information, go to www.asahq.org/publicationsAndServices/sgstoc.htm.

Commission on Dental Accreditation (CODA). *Accreditation Standards for Predoctoral and Advanced Dental Education Programs*. Available at ADA.org/115.aspx.

National Institute for Occupational Safety and Health (NIOSH). *Controlling Exposures to Nitrous Oxide During Anesthetic Administration* (NIOSH Alert: 1994 Publication No. 94-100). Available at www.cdc.gov/niosh/docs/94-100/.

Dionne, Raymond A.; Yagiela, John A., et al. Balancing efficacy and safety in the use of oral sedation in dental outpatients. *JADA* 2006;137(4):502-13. ADA members can access this article online at jada.ada.org/cgi/content/full/137/4/502.

ADA

**GUIDELINES FOR THE USE OF SEDATION AND GENERAL ANESTHESIA
BY DENTISTS**

Guidelines for the Use of Sedation and General Anesthesia by Dentists

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 providing sedation and anesthesia in compliance with their state rules and/or regulations prior to adoption of this document are not subject to *Section III, Educational Requirements*.

II. DEFINITIONS

Methods of Anxiety and Pain Control

analgesia — the diminution or elimination of pain.

conscious sedation¹ — a minimally depressed level of consciousness that retains the patient's ability to independently and continuously maintain an airway and respond appropriately to physical stimulation or verbal command and that is produced by a pharmacological or non-pharmacological method or a combination thereof.

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. Further, patients whose only response is reflex withdrawal from repeated painful stimuli would not be considered to be in a state of conscious sedation.

combination inhalation-enteral conscious sedation (combined conscious sedation) — conscious sedation using inhalation and enteral agents.

When the intent is anxiolysis only, and the appropriate dosage of agents is administered, then the definition of enteral and/or combination inhalation-enteral conscious sedation (combined conscious sedation) does not apply.

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.

minimal sedation — 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.²

1 Parenteral conscious sedation may be achieved with the administration of a single agent or by the administration of more than one agent.

2 Portions excerpted from *Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia*, 2004, of the American Society of Anesthesiologists (ASA). A copy of the full text can be obtained from ASA, 520 N. Northwest Highway, Park Ridge, IL 60068-2573.

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. Further, patients whose only response is reflex withdrawal from repeated painful stimuli would not be considered to be in a state of minimal sedation.

When the intent is minimal sedation for adults, the appropriate initial dosing of a single enteral drug is no more than the maximum recommended dose (MRD) of a drug that can be prescribed for unmonitored home use.

The use of preoperative sedatives for children (aged 12 and under) prior to arrival in the dental office, except in extraordinary situations, must be avoided due to the risk of unobserved respiratory obstruction during transport by untrained individuals.

Children (aged 12 and under) can become moderately sedated despite the intended level of minimal sedation; should this occur, the guidelines for moderate sedation apply.

For children 12 years of age and under, 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.*

Nitrous oxide/oxygen may be used in combination with a single enteral drug in minimal sedation.

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

The following definitions apply to administration of minimal sedation:

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

incremental dosing — administration of multiple doses of a drug until a desired effect is reached, but not to exceed the maximum recommended dose (MRD).

supplemental dosing — during minimal sedation, supplemental dosing is a single additional dose of the initial dose of the initial drug that may be necessary for prolonged procedures. The supplemental dose should not exceed one-half of the initial dose and should not be administered until the dentist has determined the clinical half-life of the initial dosing has passed. The total aggregate dose must not exceed 1.5x the MRD on the day of treatment.

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.³

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 greater sedation:

titration — administration of incremental doses of a 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 — 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.³

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.

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.³

For all levels of sedation, the practitioner 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.

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

qualified dentist — meets the educational requirements for the appropriate level of sedation in accordance with Section III of these *Guidelines*, or a dentist providing sedation and anesthesia in compliance with their state rules and/or regulations prior to adoption of this document.

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, doses and 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 Classification⁴

ASA I — A normal healthy patient.

ASA II — A patient with mild systemic disease.

ASA III — A patient with severe systemic disease.

ASA IV — A patient with severe systemic disease that is a constant threat to life.

ASA V — A moribund patient who is not expected to survive without the operation.

III. EDUCATIONAL
REQUIREMENTS

ASA VI — A declared brain-dead patient whose organs are being removed for donor purposes.

E — Emergency operation of any variety (used to modify one of the above classifications, i.e., ASA III-E).

A. Minimal Sedation

1. To administer minimal sedation the dentist must have successfully completed:

a. Training to the level of competency in minimal sedation consistent with that prescribed in the *ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students*, or 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 ADA Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage minimal sedation commensurate with these guidelines;

and

c. A current certification in Basic Life Support for Healthcare Providers.

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

B. Moderate Sedation

1. To administer moderate sedation, the dentist must have successfully completed:

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 ADA 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 for Healthcare Providers and
2) Either current certification in Advanced Cardiac Life Support (ACLS) or completion of an appropriate dental sedation/anesthesia emergency management course on the same recertification cycle that is required for ACLS.

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

C. Deep Sedation or General Anesthesia

1. To administer deep sedation or general anesthesia, the dentist must have completed:
 - a. An advanced education program accredited by the ADA 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 for Healthcare Providers and
2) Either current certification in Advanced Cardiac Life Support (ACLS) or completion of an appropriate dental sedation/anesthesia emergency management course on the same re-certification cycle that is required for ACLS.
2. Administration of deep sedation or general anesthesia by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and his/her clinical staff to maintain current certification in Basic Life Support (BLS) Course for the Healthcare Provider.

For all levels of sedation and anesthesia, dentists, who are currently providing sedation and anesthesia in compliance with their state rules and/or regulations prior to adoption of this document, are not subject to these educational requirements. However, all dentists providing sedation and general anesthesia in their offices or the offices of other dentists should comply with the Clinical Guidelines in this document.

IV. CLINICAL GUIDELINES

A. Minimal sedation

1. Patient 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 may consist of a review of their current medical history and medication use. However, patients with significant medical considerations (ASA III, IV) may require consultation with their primary care physician or consulting medical specialist.

2. Pre-Operative Preparation

- The patient, parent, guardian or care giver 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.
- Baseline vital signs must be obtained unless the patient's behavior prohibits such determination.

- A focused physical evaluation must be performed as deemed appropriate.
- 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, guardian or care giver.

3. Personnel and Equipment Requirements

Personnel:

- At least one additional person trained in Basic Life Support for Healthcare Providers 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.
- 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 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:

• Oxygenation:

- Color of mucosa, skin or blood must be evaluated continually.
- Oxygen saturation by pulse oximetry may be clinically useful and should be considered.

• Ventilation:

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

• 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, 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, guardian or care giver.

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.

7. Management of Children

For children 12 years of age and under, 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*.

B. Moderate Sedation

1. Patient Evaluation

Patients considered for moderate 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 at least a review of their current medical history and medication use. However, patients with significant medical considerations (e.g., ASA III, IV) may require consultation with their primary care physician or consulting medical specialist.

2. Pre-operative Preparation

- The patient, parent, guardian or care giver 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.
- Baseline vital signs must be obtained unless the patient's behavior prohibits such determination.
- A focused physical evaluation must be performed as deemed appropriate.
- Preoperative dietary restrictions must be considered based on the sedative technique prescribed.

- Pre-operative verbal or written instructions must be given to the patient, parent, escort, guardian or care giver.

3. Personnel and Equipment Requirements

Personnel:

- At least one additional person trained in Basic Life Support for Healthcare Providers 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.
- 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.

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 auxiliary 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 consciousness (e.g., responsiveness to verbal command) must be continually assessed.

• Oxygenation:

- Color of mucosa, skin or blood must be evaluated continually.
- Oxygen saturation must be evaluated by pulse oximetry continuously.

• Ventilation:

- The dentist must observe chest excursions continually.
- The dentist must monitor ventilation. This can be accomplished by auscultation of breath sounds, monitoring end-tidal CO₂ or by verbal communication with the patient.

• Circulation:

- The dentist must continually evaluate blood pressure and heart rate (unless the patient is unable to tolerate and this is noted in the time-oriented anesthesia record).

- Continuous ECG monitoring of patients with significant cardiovascular disease should be considered.

Documentation:

- Appropriate time-oriented anesthetic record must be maintained, including the names of all drugs, dosages and their administration times, including local anesthetics, dosages and monitored physiological parameters. (See *Additional Sources of Information* for sample of a time-oriented anesthetic record).
- 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.
- 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, guardian or care giver.
- 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.

7. Management of Children

For children 12 years of age and under, 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*.

C. Deep Sedation or General Anesthesia

1. Patient Evaluation

Patients considered for deep sedation or general anesthesia must be suitably evaluated prior to the start of any sedative procedure. In healthy or medically stable individuals (ASA I, II) this must consist of at least a review of their current medical history and medication use and NPO status. However, patients with significant medical

considerations (e.g., ASA III, IV) may require consultation with their primary care physician or consulting medical specialist.

2. Pre-operative Preparation

- The patient, parent, guardian or care giver 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.
- Baseline vital signs must be obtained unless the patient's behavior prohibits such determination.
- A focused physical evaluation must be performed as deemed appropriate.
- Preoperative dietary restrictions must be considered based on the sedative/ anesthetic technique prescribed.
- Pre-operative verbal and written instructions must be given to the patient, parent, escort, guardian or care giver.
- An intravenous line, which is secured throughout the procedure, must be established except as provided in *Part IV. C.6. Pediatric and Special Needs 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 of successfully completing a Basic Life Support (BLS) Course for the Healthcare Provider.
- 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.
- 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.
- If volatile anesthetic agents are utilized, a capnograph must be utilized and an inspired agent analysis monitor should be considered.
- Resuscitation medications and an appropriate defibrillator must be immediately available.

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:**

- Color of mucosa, skin or blood must be continually evaluated.
- Oxygenation saturation must be evaluated continuously by pulse oximetry.

- **Ventilation:**

- Intubated patient: end-tidal CO₂ must be continuously monitored and evaluated.
- Non-intubated patient: Breath sounds via auscultation and/or end-tidal CO₂ must be continually monitored and evaluated.
- Respiration 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 and their administration times, including local anesthetics and monitored physiological parameters. (See *Additional Sources of Information* for sample of a time-oriented anesthetic record)
- 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, parent, escort, guardian or care giver.

6. Pediatric Patients and Those with Special Needs

Because many dental patients undergoing deep sedation or general anesthesia are mentally and/or physically challenged, 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.

In selected circumstances, deep sedation or general anesthesia may be utilized without establishing an indwelling intravenous line. These selected circumstances may include very brief procedures or periods of time, which, for example, may occur in some pediatric patients; or the establishment of intravenous access after deep sedation or general anesthesia has been induced because of poor patient cooperation.

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.

V. ADDITIONAL SOURCES OF INFORMATION

American Dental Association. Example of a time oriented anesthesia record at ADA.org.

American Academy of Pediatric Dentistry (AAPD). *Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures: An Update*. Developed through a collaborative effort between the American Academy of Pediatrics and the AAPD. Available at www.aapd.org/policies.

American Academy of Periodontology (AAP). *Guidelines: In-Office Use of Conscious Sedation in Periodontics*. Available at www.perio.org/resources-products/posppr3-4.html. **The AAP rescinded this policy in 2008.**

American Association of Oral and Maxillofacial Surgeons (AAOMS). *Parameters and Pathways: Clinical Practice Guidelines for Oral and Maxillofacial Surgery (AAOMS ParPath 01) Anesthesia in Outpatient Facilities*. Contact AAOMS at 847.678.6200 or visit www.aaoms.org/index.php.

American Association of Oral and Maxillofacial Surgeons (AAOMS). *Office Anesthesia Evaluation Manual 7th Edition*. Contact AAOMS at 847.678.6200 or visit www.aaoms.org/index.php.

American Society of Anesthesiologists (ASA). *Practice Guidelines for Preoperative Fasting and the Use of Pharmacological Agents to Reduce the Risk of Pulmonary Aspiration: Application to Healthy Patients Undergoing Elective Procedures*. Available at <https://ecommerce.asahq.org/p-178-practice-guidelines-for-preoperative-fasting.aspx>.

American Society of Anesthesiologists (ASA). *Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists*. Available at www.asahq.org/publicationsAndServices/practiceparam.htm#sedation. The ASA has other anesthesia resources that might be of interest to dentists. For more information, go to www.asahq.org/publicationsAndServices/sgstoc.htm.

Commission on Dental Accreditation (CODA). *Accreditation Standards for Predoctoral and Advanced Dental Education Programs*. Available at ADA.org/115.aspx.

National Institute for Occupational Safety and Health (NIOSH). *Controlling Exposures to Nitrous Oxide During Anesthetic Administration* (NIOSH Alert: 1994 Publication No. 94-100). Available at www.cdc.gov/niosh/docs/94-100/.

Dionne, Raymond A.; Yagiela, John A., et al. Balancing efficacy and safety in the use of oral sedation in dental outpatients. *JADA* 2006;137(4):502-13. ADA members can access this article online at jada.ada.org/cgi/content/full/137/4/502.

Licensed Dentists

Oral Conscious Sedation for Minor Patients Permits

Business and Professions Code, Section 1647.10, defines Oral Conscious Sedation for Minor Patients as, "...a minimally depressed level of consciousness produced by oral medication that retains the patient's ability to maintain independently and continuously an airway, and respond appropriately to physical stimulation or verbal command." This permit applies to dental patients under the age of 13 years.

Business and Professions Code Sections 1647.10 to 1647.17 and 1680(z), as well as Title 16, California Code of Regulations, Section 1044, provide specific information regarding Oral Conscious for Minor Patients Permits.

Applying for an Oral Conscious Sedation for Minor Patients Permit

The primary requirements for a certificate to administer oral conscious sedation for a minor patient include, but may not be limited to:

- A completed application form with fee, ensuring that any office setting where oral conscious sedation is administered to minor patients complies with the requirements set in regulations adopted by the Board (Title 16, California Code of Regulations, Section 1044.5).
- A completed application form
- A current, active license to practice dentistry in this state, or a current permit issued pursuant to Business and Professions Code, Section 1638 or 1640.
- Provide documentation of one of the following:
 - Successful completion of a postgraduate program in oral and maxillofacial surgery or pediatric dentistry approved by the Commission on Dental Accreditation or a comparable organization approved by the Board.
 - Successful completion of a periodontics or general practice residency or other advanced education in a general dentistry program approved by the Board.
 - Successful completion of a Board-approved educational program on oral medications and sedation. Applicant must provide a copy of their certificate or diploma.
 - If qualification method is a general residency or other advanced education in a general dentistry program, you must also have your educational institution complete the Certification of Oral Conscious Sedation for Minors Training (OCSM-2) form.
 - Non-refundable application fee: \$200

Board-Approved Programs

The Board has approved courses in minor patient oral conscious sedation offered by the following providers:

- LLU, Dept. of Continuing Dental Education (909-558-4685)

- UCLA, Dept. of Continuing Dental Education (310-206-8388)
- CME Associates, Orange (714-998-2208)
- UCSF, Continuing Dental Education (415-476-1101)
- USC, Continuing Oral Health Professional Education (213-821-2127) or e-mail cedental@usc.edu
- DOCS Education (866-592-9618) DOCS Education
- Rocky Mountain Sedation (406-698-8538) <http://rockymountainsedation.com/>

Renewing Your Permit

Oral Conscious Sedation Certificates for Minor Patients expire when the qualifying license expires and must be renewed every two years. The fee for renewal is \$75. The Continuing Education requirement for renewal is seven units of approved courses related to oral conscious sedation of minors.

For more information, contact Jeff Pennington 916-263-2356 or at Jeff.Pennington@dca.ca.gov.

BUSINESS AND PROFESSIONS CODE

SECTION 1647.10-1647.17

1647.10. As used in this article:

(a) "Oral conscious sedation" means a minimally depressed level of consciousness produced by oral medication that retains the patient's ability to maintain independently and continuously an airway, and respond appropriately to physical stimulation or verbal command.

(1) The drugs and techniques used in oral conscious sedation shall have a margin of safety wide enough to render unintended loss of consciousness unlikely. Further, patients whose only response is reflex withdrawal from painful stimuli would not be considered to be in a state of oral conscious sedation.

(2) For very young or handicapped individuals, incapable of the usually expected verbal response, a minimally depressed level of consciousness should be maintained.

(b) "Minor patient" means a dental patient under the age of 13 years.

(c) "Certification" means the issuance of a certificate to a dentist licensed by the board who provides the board with his or her name, and the location where the administration of oral conscious sedation will occur, and fulfills the requirements specified in Sections 1647.12 and 1647.13.

1647.11. (a) Notwithstanding subdivision (a) of Section 1647.2, a dentist may not administer oral conscious sedation on an outpatient basis to a minor patient unless one of the following conditions is met:

(1) The dentist possesses a current license in good standing to practice dentistry in California and either holds a valid general anesthesia permit, conscious sedation permit, or has been certified by the board, pursuant to Section 1647.12, to administer oral sedation to minor patients.

(2) The dentist possesses a current permit issued under Section 1638 or 1640 and either holds a valid general anesthesia permit, or conscious sedation permit, or possesses a certificate as a provider of oral conscious sedation to minor patients in compliance with, and pursuant to, this article.

(b) Certification as a provider of oral conscious sedation to minor patients expires at the same time the license or permit of the dentist expires unless renewed at the same time the dentist's license or permit is renewed after its issuance, unless certification is renewed as provided in this article.

(c) This article shall not apply to the administration of local anesthesia or a mixture of nitrous oxide and oxygen or to the administration, dispensing, or prescription of postoperative medications.

1647.12. A dentist who desires to administer, or order the administration of, oral conscious sedation for minor patients, who does not hold a general anesthesia permit, as provided in Sections 1646.1 and 1646.2, or a conscious sedation permit, as provided in Sections 1647.2 and 1647.3, shall register his or her name with the board on a board-prescribed registration form. The dentist shall

submit the registration fee and evidence showing that he or she satisfies any of the following requirements:

(a) Satisfactory completion of a postgraduate program in oral and maxillofacial surgery or pediatric dentistry approved by either the Commission on Dental Accreditation or a comparable organization approved by the board.

(b) Satisfactory completion of a periodontics or general practice residency or other advanced education in a general dentistry program approved by the board.

(c) Satisfactory completion of a board-approved educational program on oral medications and sedation.

1647.13. A certificate holder shall be required to complete a minimum of 7 hours of approved courses of study related to oral conscious sedation of minor patients as a condition of certification renewal as an oral conscious sedation provider. Those courses of study shall be accredited toward any continuing education required by the board pursuant to Section 1645.

1647.14. (a) A physical evaluation and medical history shall be taken before the administration of, oral conscious sedation to a minor. Any dentist who administers, or orders the administration of, oral conscious sedation to a minor shall maintain records of the physical evaluation, medical history, and oral conscious sedation procedures used as required by the board regulations.

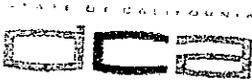
(b) A dentist who administers, or who orders the administration of, oral conscious sedation for a minor patient shall be physically present in the treatment facility while the patient is sedated and shall be present until discharge of the patient from the facility.

(c) The drugs and techniques used in oral conscious sedation to minors shall have a margin of safety wide enough to render unintended loss of consciousness unlikely.

1647.15. The fee for an application for initial certification or renewal under this article shall not exceed the amount necessary to cover administration and enforcement costs incurred by the board in carrying out this article. The listed fee may be prorated based upon the date of the renewal of the dentist's license or permit.

1647.16. Any office in which oral conscious sedation of minor patients is conducted pursuant to this article shall, unless otherwise provided by law, meet the facilities and equipment standards set forth by the board in regulation.

1647.17. A violation of any provision of this article constitutes unprofessional conduct and is grounds for the revocation or suspension of the dentist's permit, certificate, license, or all three, or the dentist may be reprimanded or placed on probation. The proceedings under this section shall be conducted in accordance with Chapter 5 (commencing with Section 11500) of Part I of Division 3 of Title 2 of the Government Code, and the board shall have all the powers granted therein.



Dental Board of California
 2005 Evergreen Street, Suite 1550, Sacramento, California 95815
 P (916) 263-2300 | F (916) 263-2140 | www.dbc.ca.gov



CERTIFICATION OF ORAL CONSCIOUS SEDATION FOR MINORS TRAINING

Applicant: Complete the top of this form and have your oral conscious sedation training by the educational institution where you obtained the training. Submit this completed form with your application for the certificate.

Applicant Name _____
 California Dental License Number _____
 Name of School attended and dates _____

EDUCATIONAL INSTITUTION: Complete This Portion Of Form

This dentist is applying for a certificate to administer or order the administration of oral conscious sedation on an outpatient basis to minor patients in California. One means to qualify for a certificate is to provide proof of completion of a board approved educational program on oral medications and sedation.

Training offered at this educational institution did not satisfy the criteria outlined in California Code of Regulations Section 1044.3.

 Signature Date

 Printed Name & Title Telephone No.

Training in oral medications and sedation consisted of satisfactory completion of at least 25 hours of instruction including a clinical component consisting of an adequate number of cases to demonstrate personal competency in oral conscious sedation of a minor patient. The course included the areas outlined in California Code of Regulations Section 1044.3 incorporated herein by reference.

I hereby certify that _____ satisfactorily completed
 (Name)
 referenced instruction at _____ Participant was enrolled
 in a _____ program when obtaining training in oral
 medications and sedation.

Dates of training _____

 Signature Date

 Printed Name Title Telephone Number

Seal of Educational
 Institution



Dental Board of California
 2005 Evergreen Street, Suite 1550, Sacramento, California 95815
 P (916) 263-2300 | F (916) 263-2140 | www.dbc.ca.gov

**APPLICATION FOR ORAL CONSCIOUS SEDATION
 FOR MINORS CERTIFICATE**

Sections 1647.10-1647.17 Business and Professions Code;
 Title 16 California Code of Regulations Sections 1044 - 1044.5

Non Refundable FEE: \$200
 (must be enclosed with application)
 Section 1021 Title 16 California Code of Regulations

Receipt No.	_____ RC _____
Amount	_____ Initials _____
Certificate No	_____
Issued	_____

Name _____

Address of Record (Mail)
 Street and Number _____

City _____ ZIP Code _____

Address of Practice if different
 Street and Number _____

City _____ ZIP Code _____

Telephone number () _____

FAX number _____

Email address _____

Birthdate _____

Dental License Number _____

QUALIFICATION – Indicate under which method listed below you qualify for an oral conscious sedation certificate for minors and attach appropriate documentation.

- Successful completion of a postgraduate program in oral and maxillofacial surgery, pediatric dentistry, or periodontics approved by the Commission on Dental Accreditation or a comparable organization approved by the Board.
- Successful completion of a general practice residency or other advanced education in a general dentistry program approved by the Board.
- Successful completion of a Board-approved educational program on oral medications and sedation. Applicant must provide completed form OCS-2 to document completion.

By initialing below and completing the application you are certifying that any location where you administer oral conscious sedation to minor patients meets the Board's requirements set forth in regulation and in this application.

FACILITIES AND EQUIPMENT

1. An operatory large enough to adequately accommodate the patient and permit a team consisting of at least three individuals to freely move about the patient. Initial _____
2. A table or dental chair that permits the patient to be positioned so the attending team can maintain the airway, quickly alter patient position in an emergency and that provides a firm platform for the management of cardiopulmonary resuscitation. Initial _____
3. A lighting system that is adequate to permit evaluation of the patient's skin and mucosal color and a backup lighting system that is battery-powered and of sufficient intensity to permit completion of any treatment that may be underway at the time of a general power failure. Initial _____
4. An appropriate functional suctioning device that permits aspiration of the oral and pharyngeal cavities. A backup suction device that can function at the time of general power failure must also be available. Initial _____
5. A positive-pressure oxygen delivery system capable of administering greater than 90% oxygen at a 10 liter/minute flow for at least sixty minutes (650 liter "E" cylinder), even in the event of a general power failure. All equipment must be capable of accommodating minor patients of all ages and sizes. Initial _____
6. Inhalation sedation equipment, if used in conjunction with oral sedation, must have the capacity for delivering 100%, and never less than 25%, oxygen concentration at a flow rate appropriate for a minor patient's size and have a fail-safe system. The equipment must be maintained and checked for accuracy at least annually. Initial _____
7. Ancillary equipment maintained in good operating condition, which must include all of the following: Initial _____
 - (a) Oral airways capable of accommodating minor patients of all ages and sizes.
 - (b) Sphygmomanometer with cuffs of appropriate size for minor patients of all ages and sizes.
 - (c) Precordial/pretracheal stethoscope.
 - (d) Pulse oximeter.

Initial _____

RECORDS

1. Adequate medical history and physical evaluation records updated prior to each administration of oral conscious sedation that show at a minimum:
 - (a) Name, age, sex and weight.
 - (b) ASA Risk Assessment (American Society of Anesthesiologists Classification)
 - (c) Rationale for sedation of the minor patientInitial _____
2. Oral Conscious Sedation records which show:
 - (a) Baseline vital signs. If obtaining baseline vital signs is prevented by the patient's physical resistance or emotional condition, the reason or reasons must be documented.
 - (b) Intermittent quantitative monitoring of oxygen saturation, heart and respiratory rates and blood pressure as appropriate for specific techniques.
 - (c) Drugs administered, amounts administered and time or times administered, including local and inhalation anesthetics.
 - (d) Length of the procedure.
 - (e) Any complication of oral sedation.
 - (f) Statement of patient's condition at the time of discharge.Initial _____
3. Written informed consent of the parent or guardian. Initial _____

Form OCS-1 Rev. 1/05

EMERGENCY CART OR KIT

1. Equipment and drugs appropriate for the age and size of the patients to resuscitate a non breathing and unconscious minor patient and provide continuous support while the patient is transported to a medical facility.
2. Vasopressor
3. Corticosteroid
4. Bronchodilator
5. Appropriate drug antagonists
6. Antihistaminic
7. Anticholinergic
8. Anticonvulsant
9. Oxygen
10. Dextrose or other antihypoglycemic
11. Documentation that all emergency equipment and drugs are checked and maintained on a prudent and regularly scheduled basis.

Initial _____

EMERGENCIES All persons directly involved with the care of minor patients must be certified in basic cardiac life support (CPR) and recertified biennially.

PALS

Initial _____

Pursuant to Business and Professions Code 1647.14(b), a dentist who administers, or who orders the administration of oral conscious sedation for a minor patient shall be physically present in the treatment facility while the patient is sedated and shall be present until discharge of the patient from the facility.

Initial _____

Provide the addresses of all locations of practice where you order or administer oral conscious sedation to minor patients. All offices must meet the standards set forth by the Dental Board of California in regulations adopted by the Board.

IF NECESSARY, CONTINUE ON BACK OF THIS PAGE.

Certification - I certify under the penalty of perjury under the laws of the State of California that the foregoing is true and correct and I hereby request a certificate to administer or order the administration of oral conscious sedation of minors in my office setting(s) as specified by the Dental Practice Act and regulations adopted by the Board. Falsification or misrepresentation of any item or response on this application or any attachment hereto is sufficient basis for denying or revoking this certificate.

Signature of Applicant

INFORMATION COLLECTION AND ACCESS

The information requested herein is mandatory and is maintained by Dental Board of California, 1432 Howe Ave, Suite 85, Sacramento, CA 95 Executive Officer, in accordance with Business & Professions Code, §1600 et seq. Failure to provide all or any part of the requested informatio will result in the rejection of the application as incomplete. Each individual has the right to review the personal information maintained by the agency unless the records are exempt from disclosure. Applicants are advised that the names(s) and address(es) submitted will be release to the public upon request and may be posted on the Internet.