

# Academy of General Dentistry

## GD White Paper on Enteral Conscious Sedation

*Editor's note: This white paper was developed at the AGD Enteral Conscious Sedation Conference in November 2005. Participants included John Yagiela, DDS, PhD, professor and chair of the Division of Diagnostic and Surgical Sciences, UCLA School of Dentistry; Stanley F. Malamed, DDS, professor of anesthesia and medicine, University of Southern California School of Dentistry; Mark Donaldson, BSc, RPh, PharmD, director of Pharmacy Services, Kalispel Regional Medical Center (Montana); Roger Winland, DDS, MAGD, AGD Editor; and Mike Edwards, DMD, MAGD, chair of the AGD Enteral Conscious Sedation Task Force.*

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### I. Introduction

#### A. AGD Policy Statement on the Use of Enteral Conscious Sedation in Dentistry

#### B. AGD Statement of Purpose

In recognizing the importance of controlling anxiety and pain in dental patients, the AGD believes all dentists should have adequate access to training in enteral conscious sedation and the availability to practice this modality.

Training may be received through pre- or post-doctoral education or in a continuing education program.

### II. Definitions

**A. Sedation:** A depressed level of consciousness. Because sedation incorporates a continuum of central nervous system (CNS) depression, specific levels are defined:

**Anxiolysis (minimal sedation):** The diminution or elimination of anxiety. This may be accomplished by the use of medication that is administered in an amount consistent with the manufacturer's current recommended dosage and/or judgment on the part of the clinician with or without nitrous oxide and oxygen.

When the intent is anxiolysis only, the definition of enteral conscious sedation and the training and performance standards described herein do not apply.

**Conscious sedation (moderate sedation):** 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

**Table 1. American Society of Anesthesiologists (ASA) physical status classification system.<sup>2</sup>**

ASA physical status classification	ASA definition	AGD recommendations pertaining to sedation
I	A normal healthy patient	Normal sedation protocol
II	A patient with a mild systemic disease	Normal sedation protocol is generally indicated with consideration for modification of sedation protocol
III	A patient with severe systemic disease	Normal sedation protocol may be indicated after serious consideration for modification of sedation protocol
IV	A patient with severe disease that is a constant threat to life	Invasive dental care (elective or emergency) is not indicated in the dental office setting
V	A moribund patient who is not expected to survive without the operation	Not applicable
VI	A declared brain-dead patient whose organs are being removed for donor purposes	Not applicable

**Table 2.** Modification of sedation protocol for medical risk patients (ASA II, III).<sup>2</sup>

- Recognize the patient's degree of medical risk.
- Complete medical consultation before dental therapy, as needed.
- Schedule the patient's appointment at a time of day when their stress will be least.
- Monitor and record preoperative and postoperative vital signs.
- Use sedation regimen with minimal potential for causing physiologic disturbances.
- Administer adequate pain control during therapy.
- Ensure length of appointment does not exceed the patient's limits of tolerance.
- Follow up with postoperative pain and anxiety control.
- Telephone the higher medical risk patient later on the same day that treatment was delivered.
- Arrange the appointment for the highly anxious or fearful, moderate-to-high-risk patient during the first few days of the week when the office is open for emergency care and the treating doctor is available.

**Table 3.** Sedation record for enteral conscious sedation.

An enteral conscious sedation record should include the following information:

- Patient name
- Date of procedure
- Verification of accompaniment for discharge
- Preoperative blood pressure, heart rate, and oxygen saturation
- ASA status
- Names of all medications administered
- Doses of all medications administered
- Time of administration of all medications
- List of monitors used
- Record of systolic and diastolic blood pressure, heart rate, oxygen saturation and level of consciousness at 15-minute intervals
- Time of the start and completion of the administration of enteral-sedation
- Time of the start and completion of the dental procedure
- Recovery period
- Discharge criteria met: oriented, ambulatory, vital signs stable (record of blood pressure, heart rate, oxygen saturation)
- Time of discharge
- Name of the professional responsible for the case
- A notation of any complications or adverse reaction

painful stimuli would not be considered to be in a state of conscious sedation.<sup>1</sup>

**Enteral conscious sedation:** Any technique of conscious sedation in which the sedative agent is absorbed through the gastrointestinal (GI) tract or oral mucosa (for example, oral, rectal, or sublingual).

**Deep sedation:** An induced state of depressed consciousness accompanied by partial loss of protective reflexes, including the inability to continually maintain an airway independently and/or to respond purposefully to physical stimulation or verbal command, and is produced by a pharmacological or non-pharmacological method or combination thereof.<sup>1</sup>

Patient management at this level of sedation is beyond the scope of this document and mandates advanced formal training in general anesthesia.

**B. Maximum recommended dose (MRD):** Maximum recommended single dose of a medication that can be prescribed for a particular indication.

### III. Training requirements

#### A. General guidelines

1. All persons involved in the management of sedation patients must hold a currently valid Basic Life Support (BLS or CPR)

for Healthcare Providers card.

2. An adult enteral sedation course shall consist of a minimum of 20 hours of didactic training that meets the requirements of the ADA's *Guidelines for teaching the comprehensive control of anxiety and pain in dentistry* and has twenty sedation experiences. This training may consist of videotaped cases of actual sedations, which may be edited to emphasize important clinical concepts.

#### **B. Pediatric guidelines**

1. An additional six hours of training in pediatric enteral conscious sedation emphasizing physiology, metabolism, anatomy and pharmacological considerations are required for the use of enteral conscious sedation in patients under 13 years of age or less than 90 pounds.
2. It is suggested that practitioners who provide enteral conscious sedation maintain current certification in Pediatric Advanced Life Support (PALS).

#### **C. The essential knowledge emphasized in each course**

All dentists administering enteral sedation must have a sufficient and current knowledge-base of the drugs he/she is administering, including the pharmacology, indications, contraindications, dosing, adverse reactions, interactions and their management.

#### **D. Continuing education**

Nine hours of PACE- and/or CERP-approved courses directly related to the clinical use of enteral sedation every three years. In addition, BLS (CPR) is required to be current.

### **IV. Sedation medications and usage**

#### **A. Medications**

Only those medications and techniques with which the practitioner is thoroughly familiar should be used.

#### **B. Dosages**

1. Single dosages  
No single dosage administration should exceed a single MRD in one dose for that particular drug.
2. Multiple dosages  
Any medication that is used in multiple dosing beyond the MRD in aggregate should be capable of being reversed.
  - a. The interval between dosing must be adequate to permit evaluation of the CNS depressant effects of previously administered medication(s).

- b. No additional sedative medication(s) should be given when acceptable sedation is noted as judged by patient or dentist.

#### **C. Multiple agents**

1. Use of additional enteral conscious sedation medications and or inhalation sedation (that is, N<sub>2</sub>O-O<sub>2</sub>) should be done with caution due to the possible occurrence of a greater level of CNS depression than desired.
2. Local anesthesia dosing limits must be clearly understood and adhered to in order to prevent additive toxicity.

### **V. Monitoring**

The following systems must be monitored during the sedation appointment (as described below) to ensure the safety of the patient during enteral conscious sedation.

1. Central nervous system (CNS)  
Patient responsiveness to verbal command must be assessed every five minutes following the administration of the medication until appropriate discharge criteria are met.
2. Respiratory system  
Use of continuous pulse oximetry commencing at the time a clinical effect of the sedation medication is first manifested and continuing until appropriate discharge criteria are met.
3. Cardiovascular system (CVS)  
Blood pressure and heart rate must be assessed every 15 minutes commencing at the time a clinical effect of the sedation medication is first manifested and continuing until appropriate discharge criteria are met.

### **VI. Documentation**

At a minimum, an enteral conscious sedation record must include the following:

1. Review of patient's medical and pharmacological history sufficient to enable the dentist to assign an ASA status (see Table 1) and to assess risk factors in relation to sedation (see Table 2), including any adverse reactions to medications.
2. Physical evaluation to include patient's age, weight, and height; general appearance, noting obvious abnormalities; and visual examination of the airway, such as range of motion, loose teeth, potential obstruction from large tongue, tonsils, and so forth.
3. Informed consent for enteral sedation must include risks and alternatives and be signed by the patient, parent or legal guardian prior to the administration of CNS depressive

medications by the patient, parent, or legal guardian. A separate signed consent form is required for each visit.

4. The sedation record should be time-based and should include the information described in Table 3.

## VII. Discharge protocol

### A. Discharge criteria for the patient

1. Conscious and oriented
2. Vital signs are stable
3. Ambulatory with minimal assistance

### B. Discharge responsibility

1. Patient must be discharged from the office into the care of a responsible adult who has a vested interest in the health and safety of the patient. Written and verbal instructions must be provided that include an admonition for the patient not to operate a motor vehicle or any dangerous equipment for a minimum of 18 hours or longer if drowsiness or dizziness persists.
2. Privacy information/HIPAA form for the escort to sign, if applicable.

### C. Administration of reversal agents

If a reversal agent is administered before discharge criteria have been met, the patient must be kept in a monitored environment for minimum of two hours. Routine discharge criteria must also be met.

### D. Postoperative analgesia

With respect to postoperative analgesia, nonsteroidal anti-inflammatory drugs (NSAIDs) should be encouraged.

## VIII. Emergency management

### Responsibility of the dentist

The dentist is responsible for the anesthetic management, adequacy of the facility, and treatment of emergencies associated with the administration of enteral conscious sedation, including immediate access to appropriate pharmacologic antagonists and properly sized equipment for establishing a patent airway and providing positive pressure ventilation with oxygen.<sup>1</sup>

## References

1. American Dental Association. Guidelines for the use of conscious sedation, deep sedation, and general anesthesia for dentists. Available at: [http://www.ada.org/prof/resources/positions/statements/anesthesia\\_guidelines.pdf](http://www.ada.org/prof/resources/positions/statements/anesthesia_guidelines.pdf). Accessed November 9, 2005.
2. American Society of Anesthesiologists. ASA physical status classification system. Available at: <http://www.asahq.org/clinical/physicalstatus.htm>. Accessed November 9, 2005.
3. Malamed SF. Medical emergencies in the dental office, ed. 6. St. Louis: C.V. Mosby;2006.