American Society of
Dentist Anesthesiologists

June 29, 2015

Dr. James M. Boyle, III
Chair, Council on Dental Education and Licensure
American Dental Association
211 East Chicago Avenue
Chicago, IL 60611

Sent via email: JasekJ@ada.org

Dear Dr. Boyle:

Thank you for allowing the American Society of Dentist Anesthesiologists (ASDA) to provide input on the *ADA Guidelines for the Use of Sedation and General Anesthesia by Dentists* and *ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students.* The ASDA comprises a group of dentists who have completed a minimum of two years of full-time general anesthesia residency training at an accredited institution and/or hospital. We have solicited our membership for recommendations on sedation safe practices, and have provided the ASDA list of recommendations below:

Lines 119 – 123
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"

Recommendation: "titration-administration of incremental **intravenous** 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."

Reason: DUE TO THE VARIABILITY IN ABSORPTION AND DISTRIBUTION OF ENTERALLY ADMINISTERED SEDATIVES, oral medication should not be "titrated" at the same appointment on the same day, but must reserve sedative administration dose changes to a subsequent appointment.

Lines 312 – 316
"Baseline vital signs (i.e., blood pressure, pulse rate, respiration rate, and blood oxygen saturation by pulse oximetry) must be obtained unless invalidated by the nature of the patient, procedure or equipment the patient's behavior prohibits such determination."

Recommendation: Nitrous oxide minimal sedation alone does not necessitate pulse oximetry if patient is capable of positive verbal command responses. Nitrous oxide moderate sedation in combination with other sedative medications must have baseline vital signs including pulse oximetry monitoring.

Line 315
A focused physical evaluation must be performed as deemed appropriate, including recording the patient's body weight.

Recommendation: A dentist-focused physical evaluation must be performed and deemed appropriate prior to **moderate sedation**, including recording of the patient's body weight.

Reason: The sedating dentist must perform the physical evaluation of his/her patient immediately prior to the sedation. Nitrous oxide inhalation minimal sedation alone does not require body weight for safety or efficacy, while moderate sedation does require weight for medication safety and efficacy administration.

Lines 331 – 333 & 431 – 433 & 561-63
A log of equipment maintenance, including monitors and anesthesia delivery system, must be maintained. A pre- and post-procedural check of equipment for each administration of sedation must be performed.

Recommendation: Change above to read: Sedation/anesthesia equipment should be periodically calibrated and inspected. A pre-procedure check for equipment capable of delivering positive pressure oxygen must be performed.

Reason: A log can be signed off without even looking at the equipment. Whereas "calibrated and inspected" should have qualified technician documentation.

Line 353
Oxygen saturation by pulse oximetry must be used unless precluded or invalidated by the nature of the patient, procedure, or equipment.

Recommendation: Oxygen saturation by pulse oximetry must be used with **moderate sedation** unless precluded or invalidated by the nature of the patient, procedure, or equipment.

Reason: Nitrous oxide inhalation minimal sedation alone does not require pulse oximetry for safety or efficacy, while moderate sedation does require pulse oximetry for safety and efficacy of medication administered.

Line 399 – 404
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, within the previous 30 days, of their current medical history, and medication use.

Recommendation: 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), the dentist administering moderate sedation must perform a comprehensive review of the patient's current medical history, at least, PRIOR TO THE ADMINISTRATION OF SEDATION.

Reason: "previous 30 days" was omitted because patient evaluation by the sedating dentist, immediately prior to administration of sedative, will yield more up-to-date patient information. The sedating dentist must not rely on a 30-day old medical history done by someone else. The sedating dentist must account for the patient he/she is about to sedate.

Lines 414 – 415
A focused physical evaluation must be performed, ~~within the previous 30 days~~, as deemed appropriate.

Recommendation: striking out "previous 30 days". Same above reason Line 399-404.

Lines 438 – 440 for moderate sedation under equipment
End tidal CO2 must be monitored unless precluded or invalidated by the nature of the patient, procedure, or equipment. In addition, ventilation shall be monitored by evaluation by continual observation of qualitative signs, including chest excursion and auscultation of breath sounds.

Recommendation: The above paragraph should be moved to the "monitoring" section instead of being under "equipment." This paragraph is also missing pulse oximetry and other vital signs monitoring devices. Please see Monitoring recommendation below.

Line 462 – 466 for moderate sedation
The dentist must monitor ventilation and/or breathing by monitoring end-tidal CO2 unless precluded or invalidated by the nature of the patient, procedure or equipment. In addition, ventilation shall be monitored by continual observation of qualitative signs, including chest excursion and auscultation of breath sounds. This can be accomplished by auscultation of breath sounds, monitoring end-tidal CO2 or by verbal communication with the patient.

Recommendation: The dentist must monitor ventilation by a combination of methods that include any or all of the following: auscultation of breath sounds, monitoring of end tidal CO2, continual verbal communication with patient in addition to continual observation of chest excursions. When emergency positive pressure ventilation is required, a device for evaluating expired CO2 (E.G., colorimetric device, capnograph) should be used.

Reason: If the patient is speaking and responding to verbal command under moderate sedation, expired CO2 monitoring has no added benefit. Expired CO2 verification devices should be used,-in emergency airway situation requiring a secured airway, and to confirm ventilation in unresponsive patients, as appropriate.

Line 531 – 533
Baseline vital signs (i.e., body weight, blood pressure, pulse rate, respiration rate, body temperature, and blood oxygen saturation) must be obtained unless invalidated by the patient, procedure or equipment the patient's behavior prohibits such determination.

Recommendation: Baseline vital signs (i.e., body weight, blood pressure, pulse rate, respiration rate, blood oxygen saturation AND, WHEN INDICATED, BODY TEMPERATURE) must be obtained unless invalidated by the patient, procedure or equipment the patient's behavior prohibits such determination.

Reason: If the patient is afebrile during pre-op assessment, continuous body temperature monitoring during moderate sedation is not necessary when Malignant Hyperthermia triggering medication is not used.

Line 572 – 574
End tidal CO2 must be monitored unless precluded or invalidated by the nature of the patient, procedure, or equipment. In addition, ventilation shall be monitored by evaluation by continual observation of qualitative signs, including chest excursion and auscultation of breath sounds.

Recommendation: The above paragraph should be moved to the "monitoring" section instead of being under "equipment." This paragraph is also missing pulse oximetry and other vital signs monitoring devices. Please refer to Line 531-533 for above reason.

Line 835-839
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.

Recommendation: Supplemental dosing during minimal sedation should be done with titration parenterally (i.e., intravenously)

Reason: Due to the variability in absorption and distribution of enterally administered sedative in different individuals, 1.5x the MRD may produce moderate sedation or even unintentional airway loss from deep sedation. Oral medication should not be "titrated" at the same appointment on the same day, but must reserve sedative administration of dose changes to a subsequent appointment.

Teaching Guidelines
Line 822
Nitrous oxide/oxygen may be used in combination with a single enteral drug in minimal sedation.

Recommendation and reason: Striking out (omitting) line 822 all together, using line 824 alone is adequate. Line 824 states "Nitrous oxide/oxygen when used in combination with sedative agent (s) may produce minimal, moderate, deep sedation or general anesthesia." This sentence encompasses line 822 and is more accurate.

Lines 1209 – 1297
We do not recommend oral (enterally) supplemental dosing, on same appointment, to an aggregate dose of 1.5x MRD for minimal sedation, due to the absorption variability and distribution of enterally administered sedative effects on different individuals. Dentist must reserve sedative administration dose changes to a subsequent appointment.

Recommendation and reason: Same at above line 835-839.

Lines 1380 – 1385
Moderate ~~Parenteral~~ Sedation Course Duration: A minimum of 60 hours of didactic instruction, plus administration of sedation for ~~management of~~ at least 20 individually-managed dental patients by ~~the intravenous~~ any route per participant including intravenous administration, is required to demonstrate ~~achieve~~ competency in moderate sedation techniques. Of the 20 cases, all must be individually managed by the anesthesia operator dentist.

See Recommendation below: We would like to see a separation between parenteral and enteral sedation teaching due to the multiple different routes of parenteral drug administration; plus variability of pharmacodynamics and pharmacokinetics on different administration modality.

Recommendation for Moderate Parenteral Sedation Courses:
Moderate Parenteral Sedation Course Duration: A minimum of 60 hours of didactic instruction, plus the administration of sedation for at least 20 dental patients. All 20 parenteral (i.e., IV, Intranasal, IM) cases must be individually managed by the anesthesia operator course participant dentist. The dentist is required to demonstrate achieved competency in parenteral moderate sedation techniques.

Recommendation for Moderate Enteral Sedation Course: Keeping the original teaching guideline with the following added:

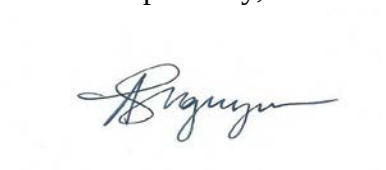
Moderate Enteral Sedation Course: A didactic course encompassing Section V, A, of Teaching Administration of Moderate Sedation. Dentist must demonstrate enteral moderate sedation on at least five live clinical dental experiences managed by participants in groups no larger than four. Must include one experience on returning (rescuing) a patient from deep to moderate sedation. Participants combining parenteral moderate sedation with nitrous oxide/oxygen must have first completed a nitrous oxide competency course.

Line 1411
A participant-faculty ratio of not more than ~~five~~ two-to-one when moderate enteral sedation is being taught allows for adequate supervision during the clinical phase of instruction

Recommendation: A participant-faculty ratio of 4:1 when moderate sedation is being taught.

In closing, patient safety is foremost when considering the above recommendations. Please contact me if any clarification needed. Thank you.

Respectfully,



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