

Policy on the Use of Deep Sedation and General Anesthesia in the Pediatric Dental Office

Originating Council

Ad Hoc Committee on Sedation and Anesthesia

Review Council

Council on Clinical Affairs

Adopted

1999

Revised

2004, 2007, 2012

Purpose

The American Academy of Pediatric Dentistry (AAPD), as the advocate for oral health in infants, children, adolescents, and persons with special health care needs, recognizes that there exists a patient population for whom routine dental care using nonpharmacologic behavior guidance techniques is not a viable approach. It also recognizes that a population of patients, because of their need for extensive treatment, acute situational anxiety, uncooperative age-appropriate behavior, immature cognitive functioning, disabilities, or medical conditions, would benefit from deep sedation or general anesthesia.¹

Methods

This document is an update of the previous policy, adopted in 1999 and last revised in 2007. This revision included an electronic search using the following parameters: Terms: safety, deep sedation, general anesthesia dental offices; Fields: all; Limits: within the last 10 years, humans, all children from birth through age 18, English, clinical trials and literature reviews. The reviewers agreed upon the inclusion of six articles that met the defined criteria. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

Pediatric dentists have long sought to provide dental care to their young and disabled patients in a manner which will promote excellence in quality of care and concurrently induce a positive attitude in the patient toward dental treatment. Behavior guidance techniques have allowed most children to receive treatment in the dental office with minimal discomfort and without expressed fear. Sedation has provided others with the ability to accept treatment. However, some children and developmentally disabled patients require general anesthesia to receive comprehensive dental care in a safe and humane fashion. In-office deep sedation and/or general anes-

thesia services have been shown to be safe and successful procedures.²⁻⁴ Many pediatric dentists (and others who treat children) have sought to provide for the administration of general anesthesia by trained individuals in their offices or other facilities (eg, outpatient care clinics) outside of the traditional hospital setting. In an effort to unify guidelines for sedation used by medical and dental practitioners, the American Academy of Pediatrics and the AAPD in 2006 co-authored a statement entitled Guideline for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures.⁵ This revised guideline reflects the current understanding of appropriate monitoring needs and, further, provide definitions and characteristics of three levels of sedation (minimal, moderate, and deep) and general anesthesia involving pediatric patients.

When deep sedation or general anesthesia is provided in a private pediatric dental office, the pediatric dentist must be responsible for evaluating the educational and professional qualifications of the general anesthesia or deep sedation provider (if it is other than the pediatric dentist) and determining that the provider is in compliance with state rules and regulations associated with the provision of deep sedation and general anesthesia. The pediatric dentist is also responsible for establishing a safe environment that complies with local, state, and federal rules and regulations, as well as the Guideline for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures³ for the protection of the patient.

Educational requirements

Deep sedation and general anesthesia must be provided only by qualified and trained individuals licensed in accordance with state regulations. Such providers may include pediatric dentists who have completed advanced education in anesthesiology beyond their pediatric residency training program, dental or medical anesthesiologists, certified registered nurse anesthetists, or anesthesia assistants. Only dentists who have

completed an advanced education program which meets the requirements of the American Dental Association (ADA) are considered qualified to provide deep sedation and general anesthesia in practice. This includes:

1. Completion of an advanced training program in anesthesia and related subjects beyond the predoctoral dental curriculum that satisfies the requirements described in the ADA Guidelines for the Use of Sedation and General Anesthesia by Dentists⁶ at the time training was commenced.
2. Completion of an ADA-accredited post-doctoral training program (eg, oral and maxillofacial surgery) which affords comprehensive training necessary to administer and manage deep sedation/general anesthesia.

Risk management

As stated above, the pediatric dentist is responsible for providing a safe environment for the in-office provision of deep sedation and general anesthesia. In addition to evaluating the qualifications of the anesthesia provider, the dentist must be involved with the following aspects of care to minimize risks for the patient:

- Facilities and equipment.
- Monitoring and documentation.
- Patient selection utilizing medical history, physical status, and indications for anesthetic management.
- Preoperative evaluation.
- Appropriately-trained support personnel.
- Emergency medications, equipment, and protocols.
- Preoperative and postoperative patient instructions.
- Criteria and management of recovery and discharge.

Continuous quality improvement

To reduce the chance of medical error and determine the cause of adverse events, aspects of continuous quality improvement are applied in the outpatient setting during the administration of deep sedation and general anesthesia as described in the Guideline for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures.⁵ Adverse events are recorded and examined for assessment of risk reduction and improvement in patient safety and satisfaction.

Policy statement

The AAPD endorses the in-office use of deep sedation or general anesthesia on select pediatric dental patients administered in an appropriately-equipped and staffed facility as outlined in the Guideline for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures.⁵

References

1. American Academy of Pediatric Dentistry. Guideline on behavior guidance for the pediatric dental patient. *Pediatr Dent* 2011;33(special issue):161-73.
2. Caputo AC. Providing deep sedation and general anesthesia for patients with special needs in the dental office-based setting. *Spec Care Dentist* 2009;29(1):26-30.
3. Messieha A, Cruz-Gonzales W, Hakim MI. Retrospective outcomes evaluation of 100 parenteral moderate and deep sedations conducted in a general practice dental residency. *Anesth Prog* 2008;55(4):116-20.
4. Boynes SG, Moore PA, Lewis CL, Zovko J, Close JM. Complications associated with anesthesia administration for dental treatment in a special needs clinic. *Spec Care Dentist* 2010;30(1):3-7.
5. American Academy of Pediatrics, American Academy of Pediatric Dentistry. Guideline for monitoring and management of pediatric patients during and after sedation for diagnostic and therapeutic procedures. *Pediatr Dent* 2011;33(special issue):185-201.
6. American Dental Association. Guidelines for the use of sedation and general anesthesia by dentists. Chicago, Ill: ADA House of Delegates; 2007. Available at: "http://www.ada.org/sections/about/pdfs/anesthesia_guidelines.pdf". Accessed August 12, 2012.