



CIGNA HEALTHCARE COVERAGE POSITION

Subject Anesthesia and Facility Services for Dental Treatment

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INSTRUCTIONS FOR USE

Coverage Positions are intended to supplement certain **standard** CIGNA HealthCare benefit plans. Please note, the terms of a participant's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Positions are based. For example, a participant's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Position. In the event of a conflict, a participant's benefit plan document **always supercedes** the information in the Coverage Positions. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable group benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Positions and; 4) the specific facts of the particular situation. Coverage Positions relate exclusively to the administration of health benefit plans. Coverage Positions are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2008 CIGNA

Coverage Position

Note: Facility services and/or deep sedation/general anesthesia provided in conjunction with dental treatment may be impacted by benefit plan language and governed by state mandates. Please refer to the applicable CIGNA HealthCare benefit plan document to determine benefit availability and the terms and conditions of coverage.

CIGNA HealthCare covers deep sedation/general anesthesia and associated facility charges in conjunction with dental surgery or procedures normally excluded under the medical plan as medically necessary in EITHER of the following situations:

- a properly-equipped and staffed office, with appropriately trained personnel, when dental services are provided by an oral surgeon or oral maxillofacial surgeon
- a hospital or outpatient surgery center when dental services are provided by a dentist, oral surgeon or oral maxillofacial surgeon

for ANY of the following:

- individual age seven years or younger
- individual who is severely psychologically impaired or developmentally disabled
- individual who has one or more significant medical comorbidities which:

➤ preclude the use of either local anesthesia or conscious sedation **OR**

- for which careful monitoring is required during and immediately following the planned procedure
 - **individuals in whom conscious sedation would be inadequate or contraindicated for any of the following procedures:**
 - removal of two or more impacted third molars
 - removal or surgical exposure of one impacted maxillary canine
 - surgical removal of two or more teeth involving more than one quadrant
 - routine removal of six or more teeth
 - full arch alveoplasty
 - periodontal flap surgery involving more than one quadrant
 - radical excision of tooth-related lesion greater than 1.25 cm or ½ inch
 - tooth-related radical resection or ostectomy with or without grafting
 - placement or removal of two or more dental implants
 - tooth transplantation or removal from maxillary sinus
 - extraction with bulbous root and/or unusual difficulty or complications noted
 - removal of exostosis involving two areas
 - removal of torus mandibularis involving two areas
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General Background

Deep sedation, or general anesthesia services, may be required to receive comprehensive dental care for some patients who have special challenges related to their age, behavior, developmental disabilities, medical status, intellectual limitations, or special needs. Oral conditions, such as caries and periodontal diseases, if left untreated, can result in loss of function, infection, and pain (American Academy of Pediatric Dentistry [AAPD], 2005c).

Sedation and anesthesia procedures performed on dental patients in nontraditional settings have increased over the past several years. These services could be provided in an office, outpatient facility, or hospital. This care should be provided by qualified and appropriately trained individuals and in facilities accredited in accordance with state regulations and professional society guidelines (AAPD, 2007a; American Dental Association [ADA], 2007a; Nick, et al., 2003; American Society of Anesthesiologists [ASA], 2004b; ASA, 2004c).

A carefully obtained and reviewed preoperative medical history, physical examination, and laboratory tests (as necessary), designed to identify high-risk patients with potential medical contraindications to office-based anesthesia, is recommended to prevent anesthetic emergencies by applying strict inclusion criteria (AAPD, 2006; Perrott, et al., 2003; D'eramo, et al., 2003; Iverson, 2002; Hoefflin, et al., 2001). Office-based facilities must ensure timely access to the healthcare system for complications that may occur during, or days after, the surgery (AAPD, 2007a; Fleisher, et al., 2004; ASA, 2004b).

It is recommended that facilities that administer general anesthesia be equipped with anesthesia emergency drugs, appropriate resuscitation equipment, and properly trained staff to quickly and skillfully respond to anesthetic medical emergencies (Doyle and Colletti, 2006; ASA, 2003). Outpatient surgery studies have generally reported a low incidence of surgery-related morbidity with proper patient selection. However, studies of adverse events following outpatient surgery suffer from limitations associated with selection bias, incomplete reporting and limited follow-up. For example, a recent study from Florida, one of few states that requires the central reporting of adverse events, observed a 10-fold increase of adverse events with surgeries performed in doctors' offices when compared to ambulatory surgical centers (Vila, et al., 2004). Factors known to be associated with adverse events include patient age (with high risk among the very young and very old), the length of the procedure, health status, the type of procedure, provider qualifications and facility accreditation (Fleisher, et al., 2004).

Literature Review

Perrott et al. (2003) conducted a prospective cohort study to provide an overview of current anesthetic practices of oral and maxillofacial surgeons in the office-based ambulatory setting. The patients received

local anesthesia, conscious sedation, or deep sedation/general anesthesia. The predictor variables were categorized as demographic, anesthetic technique, staffing, adverse events, and patient-oriented outcomes. The sample comprised 34,191 patients, 71.9% of whom received deep sedation/general anesthesia. A total of 14,912 patient satisfaction forms were completed by patients who had deep sedation/general anesthesia. The overall complication rate was 1.3 per 100 cases, and the complications were minor and self-limiting. The lowest complication rate (0.4%) was associated with the use of local anesthesia, and the highest complication rate was with deep sedation/general anesthesia (1.5%). The conscious sedation complication rate was (0.9%) ($p < 0.001$). Two patients who both received deep sedation/general anesthesia experienced complications requiring hospitalization. The patients receiving deep sedation/general anesthesia were overwhelmingly satisfied, with 95.8% reporting extreme or moderate satisfaction.

Coté et al. (2000) developed a database consisting of descriptions of adverse sedation events in pediatric patients, derived from the Food and Drug Administration's adverse drug event reporting system, from the U.S. Pharmacopeia, and from a survey of pediatric specialists. A total of 95 cases were reviewed for factors that may have contributed to adverse sedation events, ranging from death to no harm. Thirty-two of the 95 cases involved sedation/anesthesia for dental procedures, most in a nonhospital-based venue. Twenty-nine cases resulted in death or permanent neurological injury. Three cases resulted in prolonged hospitalization without injury or no harm. The authors stated this may be a result of the fact that general dentists have little pediatric training, particularly in drugs used for sedation/analgesia. The training and skills of the dental specialists was not clear from the case reports. Inadequate resuscitation was often associated with a nonhospital-based setting. In all venues, inadequate and inconsistent physiologic monitoring contributed to poor outcomes. Other issues included: inadequate presedation medical evaluation, lack of an independent observer, medication errors, and inadequate recovery procedures. The authors recommended that uniform, specialty-independent guidelines for monitoring children during and after sedation are needed. Appropriate equipment and medications for resuscitation should be immediately available, regardless of where the child is sedated. Also, all healthcare providers who sedate children should have advanced airway assessment and management training with resuscitation skills to safely rescue patients if an adverse sedation event occurs.

Professional Organizations/Societies

The American Society of Anesthesiologists (ASA): The ASA definition of levels of sedation/analgesia (ASA, 2004a):

- Minimal sedation (i.e., anxiolysis) is a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are unaffected.
- Moderate sedation/analgesia (i.e., conscious sedation) is 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 that spontaneous ventilation is adequate. Cardiovascular function is usually maintained.
- Deep sedation/analgesia is 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.
- General anesthesia is 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, drug-induced depression, or neuromuscular function. Cardiovascular function may be impaired.

*Note: Reflex withdrawal from a painful stimulus is not considered a purposeful response.

The ASA statement on qualifications of anesthesia providers in the office-based setting recommends that where anesthesiologist participation is not practicable, nonphysician anesthesia providers must, at a minimum, be supervised by the operating practitioner or other licensed physician. The supervising

operating practitioner, or other licensed physician, should be specifically trained in sedation, anesthesia, and rescue techniques appropriate to the type of sedation or anesthesia being provided, and to the office-based surgery being performed. The ASA recommends that these guidelines be read in conjunction with the ASA's guidelines for office-based anesthesia (ASA, 2004c). There have been no updates to the ASA statement since 2004

The ASA guidelines for office-based anesthesia state that, compared with licensed ambulatory surgical facilities and acute-care hospitals, offices currently have little or no regulation, oversight, or control by federal, state, or local laws. Therefore, ASA members must investigate areas taken for granted in the hospital or ambulatory surgical facility, such as governance, organization, construction and equipment; and policies and procedures including: fire, safety, drugs, emergencies, staffing, training, and unanticipated patient transfers (ASA, 2004b). There have been no updates to the guideline since 2004

The 2002 ASA evidence-based practice guideline for sedation and analgesia by non-anesthesiologists applies to procedures performed in a variety of settings (e.g., hospitals, freestanding clinics, dentist, and other offices) (Gross, et al., 2002). The guidelines allow clinicians to provide patients the benefits of sedation/analgesia while minimizing the associated risks. Numerous recommendations are included in the guideline. The following is a subset of the recommendations:

- A designated individual other than the practitioner performing the procedure should be present to monitor the patient throughout the procedures performed with sedation/analgesia. During deep sedation, this individual should have no other responsibilities.
- Whenever possible, appropriate medical specialists should be consulted prior to administration of sedation to patients with significant underlying conditions.

There have been no updates to the guideline since 2002.

The American Academy of Pediatric Dentistry (AAPD): In 2006, the AAPD and the American Academy of Pediatric (AAP) published an updated guideline for monitoring and management of pediatric patients during and after sedation for diagnostic and therapeutic procedures. This updated statement unifies the guidelines for sedation used by medical and dental practitioners, adds clarification regarding monitoring modalities, provides new information from the medical and dental literature, and suggests methods for further improvement in safety and outcomes. With this guideline, the Joint Commission on Accreditation of Healthcare Organizations, the ASA, the AAP, and the AAPD will use similar language to define sedation categories and the expected physiologic responses. The AAPD and AAP recommend the following:

- Candidates for minimal, moderate, or deep sedation are patients who are in ASA Classes I and II. Children in ASA Classes III and IV, children with special needs, and those with anatomic airway abnormalities or extreme tonsillar hypertrophy present issues that require additional and individual consideration, particularly for moderate and deep sedation. Practitioners are encouraged to consult with appropriate subspecialists and/or an anesthesiologist for patients at increased risk of experiencing adverse sedation events because of their underlying medical/surgical conditions. The ASA Physical Status Classification includes the following:
 - Class I: normally healthy patient
 - Class II: patient with mild systemic disease
 - Class III: patient with severe systemic disease
 - Class IV: patient with severe systemic disease that is a constant threat to life
 - Class V: patient who is not expected to survive without an operation
- The pediatric patient should be accompanied to and from the treatment facility by a responsible person (e.g., parent or legal guardian). It is recommended that two or more adults accompany children who are in car safety seats if transportation to and from a treatment facility is provided by one of the adults.

- The practitioner who uses sedation must have immediate available facilities, personnel, and equipment to manage emergency and rescue situations. The most common serious complications of sedation involve compromise of the airway or depressed respirations resulting in airway obstruction, hypoventilation, hypoxemia, and apnea. Hypotension and cardiopulmonary arrest may occur, usually from inadequate recognition and treatment of respiratory compromise. Rare complications may include seizures and allergic reactions.
- A protocol for access to back-up emergency services shall be identified, with an outline of the procedures necessary for immediate use. For nonhospital facilities, a protocol for ready access to ambulance service and immediate activation of the EMS system for life-threatening complications must be developed and maintained. The availability of EMS services does not replace the practitioner's responsibility to provide initial rescue in managing life-threatening complications.
- An emergency cart or kit must be immediately accessible and contain equipment to provide the necessary age- and size-appropriate drugs and equipment to resuscitate a nonbreathing and unconscious child. The contents of the kit must allow for the provision of continuous life support while the patient is being transported to a medical facility or to another area within a medical facility. All equipment and drugs must be checked and maintained on a scheduled basis. Monitoring devices must have a safety and function check on a regular basis as required by local or state regulation.
- The time and condition of the child at discharge from the treatment area or facility should be documented; this should include documentation that the child's level of consciousness and oxygen saturation in room air have returned to a state that is safe for discharge as recognized by the following criteria:
 - cardiovascular function and airway patency are satisfactory and stable
 - patient is easily arousable, and protective reflexes are intact
 - patient can talk (if age-appropriate)
 - patient can sit up unaided (if age-appropriate)
 - for a very young or handicapped child incapable of the usually expected responses, the pre-sedation level of responsiveness or a level as close as possible to the normal level for that child should be achieved
 - state of hydration is adequate

The AAPD policy on the use of deep sedation and general anesthesia in the pediatric dental office recommends the in-office use of deep sedation or general anesthesia on select pediatric dental patients administered either by a trained, credentialed, and licensed pediatric dentist, dental or medical anesthesiologist, nurse anesthetist, or anesthesia assistant in an appropriately equipped and staffed facility (AAPD, 2007a).

The AAPD guideline on the use of anesthesia care providers in the administration of in-office deep sedation/general anesthesia to the pediatric patient is to be used to assist the dental provider who elects to use an anesthesia care provider for the administration of deep sedation/general anesthesia for pediatric dental patients in a dental office or other facility outside of an accredited hospital or surgicenter. The guideline addresses personnel, facilities, documentation, and quality mechanisms required to provide responsible and optimal care to the pediatric dental patient (AAPD, 2007b).

The AAPD clinical guideline on management of persons with special healthcare needs addresses behavior management. Demanding and resistant behaviors can interfere with the safe delivery of dental treatment in patients with special healthcare needs. When protective stabilization by the parent or caregiver will not allow delivery of comprehensive oral healthcare in the office, appropriate sedation or general anesthesia in a hospital or outpatient surgical facility may be an appropriate setting for treatment (AAPD, 2004b). There have been no updates to the guideline since 2004.

The American Dental Association (ADA): The ADA guideline for the use of conscious sedation, deep sedation, and general anesthesia for dentists recommends that to administer deep sedation/general anesthesia, the dentist must satisfy one of the following criteria (ADA, 2007a):

- completed 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
- completed a current certification in Basic Life Support for Healthcare Providers and Advanced Cardiac Life Support (ACLS) or an appropriate dental sedation/anesthesia emergency management course

The guideline states that 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 BLS Course for the Healthcare Provider.

The ADA guideline recommends that patients must be evaluated prior to the start of any sedative/anesthetic procedure. Healthy or stable patients (i.e., ASA I or II) may require only a review of their medical history, including medication use. Patients who are medically unstable, or who have a significant health disability (i.e., ASA III or IV), will require consultation with their primary physician, or consulting medical specialist, regarding potential procedure risk. The guidelines state that a minimum of three individuals must be present: a qualified dentist to administer and monitor the deep sedation/general anesthesia; two individuals who are competent in basic life support, or its equivalent; another individual trained in patient monitoring, if the same individual administering deep sedation/general anesthesia is performing the dental procedure. The guidelines recommend that suitable equipment must be on the premises to provide advanced airway maintenance and advanced life support along with in-line oxygen analyzers for intubated patients. Further recommendations address strict monitoring, documentation, recovery, and discharge criteria (ADA, 2007a).

The American Association of Oral and Maxillofacial Surgeons (AAOMS): The AAOMS issued a statement on the control of pain and anxiety to summarize the procedures to be followed in the management of patients presenting for care by oral and maxillofacial surgeons. The rationale for the use of conscious sedation, deep sedation, and general anesthesia in conjunction with local anesthesia includes (AAOMS, 2008):

- mental age, age or level of maturity of the patient that may preclude cooperation
- reduction of pain and anxiety (e.g., angina pectoris)
- the type and complexity of surgical procedures
- conditions in which local anesthesia may not achieve the desired effect (e.g., inflammation and infection)
- when patient cooperation precludes the operator from performing the planned procedure in an optimal fashion

Summary

Dental treatment with deep sedation or general anesthesia allows dentists and specialists to improve treatment conditions and provide higher quality of care to many patients with medical and physical disabilities and other special needs. Professional societies have published guidelines that address the use of, and requirements to administer, deep sedation or general anesthesia to the dental patient. The guidelines address personnel, facilities, documentation, and quality mechanisms required to provide responsible and optimal care to patients.

Coding/Billing Information

Note: This list of codes may not be all-inclusive.

Covered when medically necessary:

HCPCS Codes	Description
D9220	Deep sedation/general anesthesia; first 30 minutes
D9221	Deep sedation/general anesthesia; each additional 15 minutes

ICD-9-CM Diagnosis Codes	Description
143.0-143.9	Malignant neoplasm of gum
170.0-170.1	Malignant neoplasm of bones of skull and face, except mandible, or malignant neoplasm of mandible
195.0	Malignant neoplasm of head, face and neck
210.4	Benign neoplasm of other and unspecified parts of mouth
213.0-213.1	Benign neoplasm of bones of skull and face, or lower jaw bone
317-319	Mental Retardation
343.0-343.9	Infantile cerebral palsy
345.0-345.9	Epilepsy
520.0-520.9	Diseases of tooth development and eruption
521.0-521.09	Diseases of hard tissues of teeth
521.1-521.9	Excessive attrition (approxmal wear) (occlusal wear)
522.0-522.9	Diseases of pulp and periapical tissues
523.0-523.9	Gingival and periodontal diseases
524.0-524.29	Dentofacial anomalies, including malocclusion
524.3-524.9	Anomalies of tooth position of fully erupted teeth
525.0-525.9	Other diseases and conditions of the teeth and supporting structures
526.0-526.9	Diseases of the jaws
758.0	Down's syndrome

***Current Procedural Terminology (CPT®) © 2007 American Medical Association: Chicago, IL.**

References

1. American Academy of Pediatric Dentistry. American Academy of Pediatric Dentistry 2007-08 Definitions, Oral Health Policies, and Clinical Guidelines. Accessed May 30, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>
2. American Academy of Pediatrics; American Academy of Pediatric Dentistry, Cote CJ, Wilson S; Work Group on Sedation. Guidelines for monitoring and management of pediatric patients during and after sedation for diagnostic and therapeutic procedures: an update. Pediatrics. 2006 Dec;118(6):2587-602.
3. American Academy of Pediatric Dentistry. Clinical guideline on management of persons with special health care needs. Adopted 2004b. Accessed May 30, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>
4. American Academy of Pediatric Dentistry Ad Hoc Committee on Sedation and Anesthesia; American Academy of Pediatric Dentistry Committee on Sedation and Anesthesia. Policy on the use of deep sedation and general anesthesia in the pediatric dental office. Revised 2007a. Pediatr Dent. 2007-2008;29(7 Reference Manual):64-5. Accessed May 30, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>
5. American Academy of Pediatric Dentistry. Clinical guideline on pediatric oral surgery. Adopted 2005a. Accessed May 30, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>

6. American Academy of Pediatric Dentistry Council on Clinical Affairs--Sedation and General Anesthesia Subcommittee; American Academy of Pediatric Dentistry Council on Clinical Affairs--Sedation and Anesthesia Subcommittee. Guideline on use of anesthesia care providers in the administration of in-office deep sedation/general anesthesia to the pediatric dental patient. *Pediatr Dent*. 2007-2008;29(7 Reference Manual):152-4. Revised 2007b. Accessed May 30, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>
7. American Academy of Pediatric Dentistry. Policy on hospitalization and operating room access for dental care of infants, children, adolescents, and persons with special health care needs. Adopted 1989. Revised 2005c. Accessed June 2, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>
8. American Academy of Pediatric Dentistry. Policy on third-party reimbursement of medical fees related to sedation/general anesthesia. Adopted 1989. Revised 2006. Accessed June 2, 2008. Available at URL address: <http://www.aapd.org/media/policies.asp>
9. American Association of Oral and Maxillofacial Surgery (AAOMS). Statement by the AAOMS concerning the management of selected clinical conditions and associated clinical procedures. The control of pain and anxiety. March 2008. Parameters and Pathways: Clinical Practice Guidelines for Oral and Maxillofacial Surgery.
10. American Dental Association. Guidelines for the use of conscious sedation, deep sedation and general anesthesia for dentists. October 2003. Updated October 2007a. Accessed June 2, 2008. Available at URL address: <http://ada.org/prof/resources/positions/statements/index.asp>
11. American Dental Association. Policy statement: the use of conscious sedation, deep sedation and general anesthesia in dentistry. October 1999. Updated October 2007b. Accessed June 2, 2008. Available at URL address: <http://ada.org/prof/resources/positions/statements/index.asp>
12. American Dental Association. Guidelines for teaching the comprehensive control of anxiety and pain in dentistry. October 2007c. Accessed June 02, 2008. Available at URL address: <http://ada.org/prof/resources/positions/statements/index.asp>
13. American Society of Anesthesiologists. Continuum of depth of sedation definition of general anesthesia and levels of sedation/analgesia. October 27, 2004a. Accessed June 2, 2008. Available at URL address: <http://www.asahq.org/publicationsAndServices/sgstoc.htm>
14. American Society of Anesthesiologists. Guidelines for office-based anesthesia. October 27, 2004b. Accessed June 2, 2008. Available at URL address: <http://www.asahq.org/publicationsAndServices/sgstoc.htm>
15. American Society of Anesthesiologists. Statement on qualifications of anesthesia providers in the office-based setting. October 27, 2004c. Accessed June 2, 2008. Available at URL address: <http://www.asahq.org/publicationsAndServices/sgstoc.htm>
16. American Society of Anesthesiologists. Guidelines for nonoperating room anesthetizing locations. October 15, 2003. Accessed June 2, 2008. Available at URL address: <http://www.asahq.org/publicationsAndServices/sgstoc.htm>
17. American Society of Anesthesiologists. ASA physical status classification system. Accessed June 2, 2008. Available at URL address: <http://www.asahq.org/clinical/physicalstatus.htm>
18. Casas MJ, Kenny DJ, Barrett EJ, Brown L. Prioritization for elective dental treatment under general anesthesia. *J Can Dent Assoc*. 2007 May;73(4):321.
19. Chung EM, Sung EC, Sakurai KL. Dental management of the down and eisenmenger syndrome patient. *J Contemp Dent Pract* 2004 May;5(2):1-6.

20. Cote CJ, Notterman DA, Karl HW, Weinberg JA, McCloskey C. Adverse sedation events in pediatrics: a critical incident analysis of contributing factors. *Pediatrics*. 2000 Apr;105(4 Pt 1):805-14.
21. D'eramo EM, Bookless SJ, Howard JB. Adverse events with outpatient anesthesia in Massachusetts. *J Oral Maxillofac Surg*. 2003 Jul;61(7):793-800; discussion 800.
22. Doyle L, Colletti JE. Pediatric procedural sedation and analgesia. *Pediatr Clin North Am*. 2006 Apr;53(2):279-92.
23. Fleisher LA, Pasternak LR, Herbert R, Anderson GF. Inpatient hospital admission and death after outpatient surgery in elderly patients: importance of patient and system characteristics and location of care. *Arch Surg*. 2004 Jan;139(1):67-72.
24. Gross JB, Bailey PL, Connis RT, Coté CJ, Davis FG, Epstein BS. Practice guidelines for sedation and analgesia by non-anesthesiologists. An updated report by the American Society of Anesthesiologists task force on sedation and analgesia by non-anesthesiologists. *Anesthesiology*. 2002 Apr;96(4):1004-17. Accessed June 2, 2008. Available at URL address: <http://www.asahq.org/publicationsAndServices/practiceparam.htm#sedation>
25. Hoefflin SM, Bornstein JB, Gordon M. General anesthesia in an office-based plastic surgical facility: a report on more than 23,000 consecutive office-based procedures under general anesthesia with no significant anesthetic complications. *Plast Reconstr Surg*. 2001 Jan;107(1):243-51; discussion 252-7.
26. Iverson RE; ASPS Task Force on Patient Safety in Office-Based Surgery Facilities. Patient safety in office-based surgery facilities: I. Procedures in the office-based surgery setting. *Plast Reconstr Surg*. 2002 Oct;110(5):1337-42; discussion 1343-6.
27. Nick D, Thompson L, Anderson D, Trapp L. The use of general anesthesia to facilitate dental treatment. *Gen Dent*. 2003 Sep-Oct;51(5):464-8; quiz 469.
28. Perrott DH, Yuen JP, Andresen RV, Dodson TB. Office-based ambulatory anesthesia: outcomes of clinical practice of oral and maxillofacial surgeons. *J Oral Maxillofac Surg*. 2003 Sep;61(9):983-95; discussion 995-6.
29. Vila H Jr, Soto R, Cantor AB, Mackey D. Comparative outcomes analysis of procedures performed in physician offices and ambulatory surgery centers. *Arch Surg*. 2004 Mar;139(3):240-1.