

GUIDELINES FOR THE USE OF SEDATION AND GENERAL ANESTHESIA

Introduction

The purpose of these guidelines is to assist dentists who provide their patients with the benefits of anxiety and pain control allowing this to be done in a safe and efficacious manner.

Definitions

Analgesia — the diminution or elimination of pain.

Anxiolysis -- the diminution or elimination of anxiety.

Local Anesthesia — the elimination of sensation, especially pain, in one part of the body by the topical application or regional injection of a drug.

Conscious 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 definition, the drugs and/or techniques used should carry a margin of safety wide enough to render unintended loss of consciousness unlikely. Patients whose only response is reflex withdrawal from repeated painful stimuli would not be in a state of conscious sedation.

Combination Inhalation-Enteral Conscious Sedation - conscious sedation using inhalation and enteral agents. Nitrous oxide/oxygen when used in combination with sedative agents may produce conscious or deep sedation or general anesthesia.

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 a combination thereof.

General Anesthesia — an induced state of unconsciousness accompanied by partial or complete loss of protective reflexes, including the ability to continually maintain an airway independently and respond purposefully to physical stimulation or verbal command, and is produced by a pharmacological or non-pharmacological method or a combination thereof.

Enteral - any technique of administration in which the agent is absorbed through the gastrointestinal tract or oral mucosa.

Parenteral - a technique of administration in which the drug bypasses the gastrointestinal tract (intramuscular, intravenous intranasal, submucosal, subcutaneous, intraocular)

Transdermal/transmucosal - a technique of administration in which the drug is administered by patch or iontophoresis.

Inhalation - a technique of administration in which a gaseous or volatile agent is introduced into the pulmonary tree and whose primary effect is due to absorption through the pulmonary bed.

GENERAL GUIDELINES

Sedation or general anesthesia may be indicated to treat patient anxiety associated with dental treatment, to enable dental treatment for patients who have cognitive impairment or motor dysfunction which prevents adequate dental treatment, to treat patients below the age of reason, for traumatic or extensive procedures or for pain control. These techniques are to be used only when indicated, or as an adjunct to appropriate nonpharmacological means of patient management. The following general guidelines apply to all modalities of sedation and general anesthesia:

- 1. Successful completion of a training program approved by the Newfoundland & Labrador Dental Board and designed to produce competency in the use of the specific modality of sedation or general anesthesia.
- 2. The dental facility must be suitably staffed and equipped as prescribed in the guidelines for each modality.
- 3. An adequate, clearly recorded health history, including all relevant illnesses, hospital admissions, current medications and dose, allergies, and a functional enquiry, along with an appropriate physical examination must be completed. This must form a permanent part of the patient's record. This history must be updated at each sedation/general anesthesia appointment and this update should be noted on the permanent record. A consultation with the patient's physician may be necessary. Laboratory investigations may be carried out at the dentist's discretion.
- 4. A determination of the patient's American Society of Anesthesiologists Physical Status Classification as well as careful evaluation of any other factors which may affect suitability for sedation or general anesthesia must be made prior to its administration. These findings will be used as a guide in determining the appropriate facility and technique to be used.

- 5. Only a licensed dentist, physician, or a registered nurse acting under the direct control of a dentist or physician, may administer any sedative or general anesthetic agent.
- 6. The dentist and staff must be prepared to recognize and treat adverse responses utilizing appropriate emergency equipment and drugs where necessary. Dentists and staff must have the training and ability to perform basic cardiac life support techniques. Dentists should establish protocols for emergency procedures and review them with their staff regularly.
- 7. A dentist should have an auxiliary staff member or patient's escort present when examining and treating a patient. The patient should never be left unattended during administration of sedation or general anesthesia. An auxiliary must be present to always assist in the treatment room.
- 8. The patient should understand the purpose and effects of the sedation or general anesthesia, and a written consent should have been obtained.

CONSCIOUS SEDATION

<u>Professional Responsibilities for all Modalities of Conscious Sedation</u>

- 1. Successful completion of a training program designed to produce competency in the use of the specific modality of conscious sedation (including indications, contraindications, patient evaluation patient selection, pharmacology of relevant drugs, management of potential adverse reactions, and familiarity with equipment) is mandatory and must be obtained from one of the following sources:
 - a. Faculties of Dentistry undergraduate and postgraduate programs, approved by the Newfoundland & Labrador Dental Board.
 - b. Other continuing education courses organized and taught by dentists certified to administer sedation and anesthesia as they apply to dentistry which are held in a properly equipped dental environment permitting the candidates to utilize the techniques being taught on patients during treatment, and which are followed by a recorded assessment of the competence of the candidates.
- 2. Should the administration of any drug produce depression beyond that of conscious sedation, the dental procedures should be halted. Appropriate support procedures must be administered until the level of depression is no longer beyond that of conscious sedation, or until additional emergency assistance is affected.

3. Conscious sedation techniques may require the patient to be discharged into the care of a responsible adult. All patients <u>must</u> be carefully assessed for fitness for discharge.

Conscious sedation may be induced by any one of the following modalities:

- 1. Oral administration of a single sedative drug
- 2. Nitrous oxide and oxygen
- 3. Combination of oral sedative drugs or nitrous oxide/oxygen with an oral sedative drug
- 4. Parenteral administration of sedative drugs

ORAL ADMINISTRATION OF A SINGLE SEDATIVE DRUG

In addition to the General Guidelines, and the Professional Responsibilities listed above, the following responsibilities apply when administering a single sedative drug. They apply only when the intent is to produce conscious sedation and not anxiolysis (please see definitions above).

- 1. Operatory must be equipped with a source of oxygen with adequate face mask, an oropharyngeal airway, and specific pharmacological agents required in the event of an emergency.
- 2. Children, the elderly, and the medically compromised, require appropriate adjustment of the dose of the sedative drug to ensure that the intended level of conscious sedation is not exceeded.
- 3. The sedative drug should be administered in the office unless a practitioner determines that the patient requires a sedative to facilitate sleep the night before the procedure or to enable the patient to arrive at the office. Patients should be monitored by clinical observation and assessment of vital signs (level of consciousness, heart rate, blood pressure and respiration).
- 4. When a sedative drug is prescribed for taking off the premises the following requirements apply:
 - a. Only one drug should be prescribed.
 - b. Neither chloral hydrate nor an opioid should be prescribed.
 - c. The patient must be instructed not to drive a vehicle and must be accompanied to and from the office.
 - d. Written instructions must be provided to the patient or the guardian explaining how to take the medication, the need for accompaniment and listing the expected side effects.
- 5. The patient may be discharged to the care of a responsible adult once he/she shows signs of increasing alertness and has met the following criteria:
 - a. conscious and oriented
 - b. vital signs are stable
 - c. ambulatory

The patient must be instructed to avoid driving a vehicle, operating hazardous machinery or consuming alcohol for a minimum of 24 hours, or longer if drowsiness persists.

NITROUS OXIDE AND OXYGEN

In addition to the General Guidelines, and the Professional Responsibilities listed above, the following responsibilities apply when administering nitrous oxide and oxygen for conscious sedation:

- 1.Gas delivery system for the administration of nitrous oxide and oxygen must:
 - a. have a fail-safe mechanism such that it will not deliver an oxygen concentration of less than 30% in the delivered gas mixture.
 - b. have pipeline inlet fittings, or pin-indexing, that do not permit interchange of connections with oxygen and nitrous oxide.
 - c. be checked regularly for functional integrity by appropriately trained personnel, must function reliably and accurately and receive care and maintenance according to the manufacturer's instructions at least annually. A written record of this maintenance should be kept.
 - d. be equipped with a common gas outlet compatible with 15mm. male and 22mm. female conical connectors.
 - e. be equipped with connectors, tubing and reservoir bag which allow the use of a full-face mask for resuscitative ventilation with 100% oxygen.
 - f. have readily available a reserve supply of oxygen ready for immediate use. This should be portable, an "E" size cylinder as a minimum and attached with appropriate regulator, flowmeter and connectors as described in (d) above.
 - g. be equipped with a scavenging system installed according to the manufacturer's instructions.
- 2. Patients must be monitored by clinical observation and assessment of vital signs at all times during treatment. Fully recovered patients can be considered for discharge unaccompanied but if a patient has any residual symptoms they must be discharged to the care of a responsible adult.
- 3. Nitrous oxide levels in the operatory should be periodically monitored.

COMBINATION OF ORAL SEDATIVE DRUGS OR NITROUS OXIDE/OXYGEN WITH AN ORAL SEDATIVE DRUG

The following protocol is in addition to the general guidelines and professional responsibilities outlined previously.

Dentists using this modality of conscious sedation must have training that has specifically incorporated the teaching of techniques using more than one sedative agent and should have been evaluated as to competency. They must be registered with the Board as using this modality.

Sedation/Recovery Protocol

- 1. The patient must have had nothing to eat or drink for a period consistent with currently accepted standards. Possible exceptions would be usual medications or preoperative medications prescribed by the dentist. If an oral sedative has been administered, nitrous oxide/oxygen must be slowly titrated to achieve the signs and symptoms of conscious sedation. There must be vigilant assessment of the level of consciousness.
- 2. Clinical observation must be supplemented by the following means of monitoring throughout the sedation administration:
 - a. continuous pulse oximeter monitoring of hemoglobin oxygen Saturation, recorded at a minimum of 15-minute intervals.
 - b. blood pressure and pulse must be taken and recorded pre-operatively, and at a minimum of 15-minute intervals throughout sedation procedure.
 - c. respiration.
- 3. A sedation record must be kept which includes the recording of vital signs as listed above.
- 4. Alarm settings and their audio component on monitoring equipment must be used at all times.
- 5. The patient may be discharged when he/she shows signs of progressively increasing alertness and has met the following criteria:
 - a. conscious, oriented
 - b. vital signs are stable
 - c. ambulatory.
- 6. The patient must be discharged into the care of a responsible adult.
- 7. Written post-sedation instructions must be given. The patient must be instructed to avoid driving a vehicle, operating hazardous machinery or consuming alcohol for a minimum of 24 hours, or longer if drowsiness or dizziness persists.

PARENTERAL ADMINISTRATION OF SEDATIVE DRUGS

Parenteral conscious sedation may be accomplished utilizing any one of the following routes of administration: intravenous, intramuscular, subcutaneous or submucosal. These guidelines would also apply when the rectal route is utilized.

The following specific responsibilities are in addition to the General Guidelines and Professional Responsibilities outlined previously.

Professional Responsibilities

- 1. All dentists administering parenteral conscious sedation must be registered as such with the Newfoundland & Labrador Dental Board.
- 2. All facilities where parenteral conscious sedation is administered must have a permit from the Board and be subject to on-site inspection and evaluation. The facility must permit adequate access for emergency stretchers and have auxiliary powered back-up for suction and lighting, in case of power or system failure.
- 3. Dentists who do not have a post-graduate qualification in anesthesia or oral/maxillofacial surgery must have successfully completed a course of instruction in parenteral conscious sedation at an accredited educational institution. The course must have included 40 hours of didactic training and supervised active participation in the treatment of at least 20 patients. Evidence of satisfactory completion of the course and a description of the program must be submitted to the Board for consideration.
- 4. As part of their training dentists must have successfully completed a provider course in Advanced
 - Cardiac Life Support or spent a 4-week rotation in the anesthesia department of a teaching hospital with active participation in the administration of general anesthesia, including venipuncture, airway maintenance and endotracheal intubation.
- 5. Only one sedative drug should be administered unless the dentist has training required for the delivery of deep sedation or anesthesia as outlined in the next section.
- 6. Only dentists with formal post-graduate qualification in anesthesia or oral and maxillofacial surgery should administer general anesthetic drugs such as short-acting barbiturates, ketamine or propofol.
- 7. A dentist qualified for this sedative technique must remain at the facility until the patient is fit for discharge.
- 8. Sedation and monitoring equipment must conform to current appropriate standards for functional safety.

Dentists whose prior training does not meet the above requirements and who have been practicing this modality must submit their qualifications to the Board for review.

The Sedation Team

The use of a sedation team allows the qualified dentist to provide parenteral conscious sedation services concurrently with dental procedures. The sedation team shall consist of the following individuals:

- 1. The *dentist*, who is directly responsible for the sedation, the sedation team, and the dental procedures.
- 2. The *sedation assistant*, who must be a nurse, dentist or physician, currently registered in Newfoundland and Labrador. It is the responsibility of the dentist to ensure that the sedation assistant is adequately trained to perform the duties. The assistant's primary function under the dentist's supervision is to:
 - a. Assess and maintain a patient airway
 - b. Monitor vital signs
 - c. Record appropriate records
 - d. Venipuncture
 - e. Administer medications as required
 - f. Assist in emergency procedures
- 3. The *operative assistant* who assists the dentist in the dental procedures and keeps the operative field clear.
- 4. The *recovery supervisor* who, under the dentist's supervision, has the primary function of monitoring patients in the recovery area, and determining if a patient meets the criteria for discharge. This person must have the same qualifications as for the sedation assistant. The sedation assistant may act as the recovery supervisor if not required for other duties. One person cannot perform both these duties simultaneously.
- 5. The *office receptionist* who attends to office duties and ensures that the sedation team is not disturbed.

Sedation Protocol

- 1. Pre-operative instructions must be given to the patient or a responsible adult. The patient must not have had any solid food for a minimum of 6 hours prior to the appointment. Clear fluids may have been taken up to 3 hours prior to the appointment. Usual medications or pre-operative medications prescribed by the dentist may be taken.
- 2. Clinical observation must be supplemented by the following means of monitoring throughout the sedation administration:
 - a) continuous pulse oximeter monitoring of hemoglobin oxygen saturation, recorded at a minimum of 15-minute intervals
 - b) blood pressure and pulse must be taken and recorded pre-operatively, and throughout the sedation period at a minimum of 15-minute intervals

- c) respiration.
- 3. A sedation record must be kept.
- 4. When intravenous sedation is used, an intravenous needle or indwelling catheter must be in place and patent at all times during the procedure. An intermittent or continuous fluid administration must be used to ensure patency.
- 5. Alarm settings and their audio component on monitoring equipment must be utilized at all times.

Recovery Protocol

- 1. The recovery area shall be used to accommodate the post-sedation patient from the completion of the procedure until the patient meets the criteria for discharge. Oxygen, suction equipment and appropriate lighting must be available. The operatory can act as the recovery area.
- 2. A sufficient number or recovery areas must be available to provide adequate recovery time for each case.
- 3. Supervision and appropriately recorded monitoring by the recovery supervisor must occur throughout the recovery period, until the patient meets the criteria for discharge.
- 4. The patient may be discharged once he/she shows signs of progressively increasing alertness, and has met the following criteria:
 - a. Conscious and oriented
 - b. Vital signs are stable
 - c. Ambulatory
- 5. The patient must be discharged into the care of a responsible adult.
- 6. Written post-sedation instructions must be provided and explained to both the patient and the accompanying adult. The patient must be instructed to not drive a vehicle, operate hazardous machinery or consume alcohol for at least 24 hours, or longer if dizziness or drowsiness persists.

Sedation Equipment

All sedation and monitoring equipment must receive regular documented service and maintenance by qualified personnel as specified by the manufacturer, at least annually. All drugs should be checked monthly. It is the dentist's responsibility to ensure that the sedation area is equipped with the following:

- 1. A 650 litre "E" cylinder of oxygen delivering 90% 02 with a minimum flow rate of 10 litres/min
- 2. Portable apparatus for intermittent positive pressure resuscitation.
- 3. Pulse oximeter.
- 4. Sphygnomanometers and stethoscopes of appropriate sizes
- 5. Tonsil suction (Yankauer) adaptable to the suction outlet
- 6. Full face masks of appropriate sizes, and connectors

- 7. Adequate selection of endotracheal tubes, and connectors
- 8. Laryngoscope with an adequate selection of blades, spare batteries and bulbs
- 9. Magill forceps
- 10. Adequate selection of oral airways
- 11. Portable auxiliary systems for light, suction and oxygen
- 12. Apparatus for emergency tracheotomy or cricothyroid membrane puncture
- 13. IV needles
- 14. Emergency drugs:
- Epinephrine
- Nitroglycerine
- Parenteral antihistamine (diphenhydramine or chlorpheniramine)
- Bronchodilator (salbutamol)
- Parenteral vasodepressor (ephedrine)
- Parenteral anticholinergic (atropine)
- Parenteral corticosteroid
- Intravenous lidocaine
- Flumazenil (if benzodiazepines are administered)
- Naloxone (if opioids are administered)
- Intravenous fluids
- Acetylsalicylic acid

DEEP SEDATION AND GENERAL ANESTHESIA Professional Responsibilities for the Use of Deep Sedation/Cana

Professional Responsibilities for the Use of Deep Sedation/General Anesthesia

The following specific responsibilities are in addition to the general guidelines outlined previously:

- 1. All dentists administering deep sedation or general anesthesia must be registered as such with the Newfoundland & Labrador Dental Board.
- 2. All dental offices where deep sedation or anesthesia is administered must receive a permit from the Newfoundland & Labrador Dental Board and be subject to on-site inspection and evaluation. The facility must have adequate access for emergency stretchers and have auxiliary back-up for suction and lighting.
- 3. Deep sedation or anesthesia must only be performed in the dental office by a professional with the following qualifications:
 - a) A dentist who has successfully completed a post-graduate anesthesia program of a duration of a minimum of 24 months at a university or teaching hospital recognized by the Newfoundland & Labrador Dental Board. The program must have evaluated and attested to the competency of the dentist.
 - b) A dentist who has successfully completed a formal post-graduate program in oral and maxillofacial surgery recognized by the Newfoundland & Labrador Dental Board,

- incorporating adequate training in anesthesia, and whose competency has been specifically evaluated and attested to.
- c) A physician registered to practise in Newfoundland & Labrador who has successfully completed a post-graduate program in anesthesia recognized by the College of Physicians & Surgeons of Newfoundland & Labrador. Adherence to these guidelines is a joint responsibility of such physicians and the treating dentist.
- 4. Pre-operative instructions must be given in writing to the patient or responsible adult. Patients should be instructed to fast prior to the appointment. This duration of fasting Should be for 8 hours after a meal that includes meat or fatty food, 6 hours after a light meal, 2 hours after clear fluids. Possible exceptions to this would be usual medications or pre-operative medications prescribed by the dentist.
- 5. The patient must never be left unattended by a dentist or physician qualified for this sedative/anesthesia technique during the administration procedure.
- 6. A dentist or physician qualified for this technique and responsible for the patient must remain at the facility until the patient is fit for discharge.
- 7. Anesthetic and monitoring equipment must conform to current appropriate standards for functional safety.

The Anesthetic Team

The anesthetic team shall consist of the following individuals:

- 1. The *dentist-anesthetist* who is directly responsible for the anesthesia, the anesthetic team, and the dental procedures.
- 2. The *anesthetic assistant* who must be a nurse, dentist or physician currently registered in Newfoundland & Labrador. It is the responsibility of the dentist to ensure that the anaesthetic assistant is adequately trained to perform the required duties. The assistant's duties, under the dentist's supervision, are:
 - a Assess and maintain a patient airway
 - b Monitor vital signs
 - c Record appropriate records
 - d Venipuncture
 - e Administer medications as required
 - f Assist in emergency procedures
- 3. The *operative assistant* who assists the dentist in the dental procedures and keeps the operative field clear.
- 4. The *recovery supervisor* who, under the dentist's supervision, has the primary function of monitoring patients in the recovery area, and determining if the patient is fit for discharge. This person must have the same qualifications as the anaesthetic assistant. The anaesthetic-

- assistant may act as the recovery supervisor if not required for other duties. One person cannot perform both these duties simultaneously.
- 5. The office receptionist who attends to office duties and ensures that the sedation team is not disturbed.

Anesthesia Protocol

- 1. Clinical observation must be supplemented by the following means of monitoring throughout the deep sedation/anesthesia administration at 5-minute intervals:
 - a) continuous pulse oximeter monitoring of hemoglobin oxygen saturation
 - b) blood pressure and pulse
 - c) respiration
 - d) continuous Electrocardioscope monitoring
 - e) if intubated, monitoring by capnometry is required
- 2. If triggering agents for malignant hyperthermia are being used (volatile inhalational general anesthetics or succinylcholine), body temperature must be measured, and appropriate emergency drugs must be available.
- 3. An anesthetic record must be kept.
- 4. An intravenous needle or indwelling catheter must be in place and patent at all times during the procedure. An intermittent or continuous fluid administration must be used to ensure patency.
- 5. Alarm settings and their audio component on monitoring equipment must be utilised at all times.

Recovery Protocol

- 1. The recovery area shall be used to accommodate the post-anaesthetic patient from the completion of the procedure until the patient meets the criteria for discharge. Oxygen, suction equipment and appropriate lighting must be available. The operatory can act as the recovery area. A sufficient number of such recovery areas must be available to provide adequate recovery time for each case.
- 2. Supervision and appropriately recorded monitoring by the recovery supervisor must occur throughout the recovery period, until the patient meets the criteria for discharge. Monitors must be immediately available for recovery use, including pulse oximeter, sphygmomanometer, and Electrocardioscope.

- 3. The patient may be discharged once he/she shows signs of progressively increasing alertness and has met the following criteria:
 - a) conscious and oriented
 - b) vital signs are stable
 - c) ambulatory
- 4. The patient must be discharged into the care of a responsible adult.
- 5. Written post-anesthesia instructions must be provided and explained to the patient and the accompanying adult. The patient must be instructed not to drive a vehicle, operate hazardous machinery or consume alcohol for at least 24 hours, or longer if drowsiness or dizziness persists.

Deep Sedation/Anesthesia Equipment

Anesthetic and ancillary equipment must be checked regularly before use for functional integrity. Equipment must be serviced according to the manufacturer's specifications at least annually. A record of this service must be kept.

1. Gas delivery systems used for the administration of nitrous oxide and oxygen must

- a) have a fail-safe mechanism such that it will not deliver an oxygen concentration of less than 30% in the delivered gas mixture.
- b) have pipeline inlet fittings, or pin-indexing that do not pen-nit interchange of connections with oxygen and nitrous oxide.
- c) be equipped with a common gas outlet compatible with 15mm male and 22mm female conical connectors.
- d) be equipped with connectors and tubing which allow use of a full-face mask for resuscitative ventilation with 100% oxygen.
- e) have readily available a reserve supply of oxygen ready for immediate use. This should be portable, an "E" size cylinder as a minimum and attached with appropriate regulator, flowmeter and connectors as described previously.
- f) be equipped with a scavenging system installed per manufacturer's specifications.
- 2. If a vaporizer is fitted to the gas delivery system, then:
 - a) It must have an agent-specific, keyed filling device.
 - b) The connection of the inlet and outlet ports of the vaporizer to the gas machine shall be such that an inadvertent incorrect attachment cannot be made.
 - c) All vaporizer control knobs must open counterclockwise and be marked to indicate vapor concentration in volume per cent. It must mark and lock the control in the "off position. The vaporizer must be connected to the scavenging system. Where multiple vaporizers are used, an Interlock System must be installed.
- 3. If the patient is intubated then the anaesthetic machine must be fitted with an oxygen supply failure protection device which conforms to the relevant CSA standard.

1

- 3. The treatment area must be equipped with all the following equipment and emergency drugs. All drugs should be checked monthly.
- a. Reserve source of oxygen
- b. Portable apparatus for intermittent positive pressure resuscitation
- c. Pulse oximeter
- d. Sphygmomanometers and stethoscopes of appropriate sizes
- e. Tonsil suction (Yankauer) adaptable to the suction outlet
- f. Full face masks of appropriate sizes and connectors
- g. Adequate selection of endotracheal tubes and appropriate connectors
- h. Laryngoscope with an adequate selection of blades, spare batteries and bulbs
- i. Magill forceps
- j. Adequate selection of oral airways
- k. Portable auxiliary systems for light, suction, and oxygen
- 1. Apparatus for emergency tracheotomy or cricothyroid membrane puncture
- m. Electrocardioscope and defibrillator
- n. Capnometer, if endotracheal intubation is used to administer general anaesthesia
- o. IV needles
- p. Drugs for management of emergencies:
 - 1. Epinephrine
 - 2. Nitroglycerine
 - 3. Parenteral antihistamine (diphenhydramine or chlorpheniramine)
 - 4. Bronchodilator (salbutamol)
 - 5. Parenteral vasodepressor (ephedrine)
 - 6. Parenteral anticholinergic (atropine)
 - 7. Parenteral corticosteroid
 - 8. Intravenous lidocaine
 - 9. Flumazenil (if benzodiazepines are administered)
 - 10. Naloxone (if opioids are administered)
 - 11. Intravenous fluids
 - 12. Antihypertensive
 - 13. Succinylcholine
 - 14. Dantrolene (if triggering agents for malignant hyperthermia are being used)
 - 15. Acetylsalicylic acid (ASA)

APPENDIX 1

Medical History and Patient Evaluation

An adequate, current, clearly recorded and signed medical history must be made for each patient. The history is part of the patient's permanent record. It forms a database upon which appropriate sedation or anesthetic modality is determined. The medical history must be kept current. This information may be organized in any format that each dentist prefers provided that the scope of the content contains the minimum information described in this section.

Vital Statistics

This includes the patient's full name, date of birth, sex, and the name of the person to be notified in the event of an emergency. In case of a minor or a mentally disadvantaged patient, the name of the parent or guardian must be recorded.

Core Medical History

The core medical history must fulfil the following two basic requirements:

- It must elicit the core medical information to enable the dentist to assign the correct ASA Classification (see Appendix II) to assess risk factors in relation to sedation or anesthetic choices.
- It must provide written evidence of a logical process of patient evaluation.

This core information should be a system-based review of the patient's past and current health status. It can be developed from the responses to the following inquiries:

- Are you now under a physician's care or direction or have you been during the last 15 years?
- ➤ When was your last medical examination?
- ➤ Have you ever had a serious illness, accident, or required hospitalization?
- Are you taking any medication(s)? If yes, what is the drug (s), dose (s) and for how, long?
- > Do you have any allergies, or have you ever had a reaction to any drugs?
- ➤ Have you ever had any breathing difficulties or asthma, emphysema, chronic cough, pneumonia, tuberculosis or any other lung problems? Do you smoke?
- ➤ Have you, or any family member, ever had any problems associated with the administration of anesthesia?
- ➤ Have you ever had any heart or blood vessel problems such as murmurs, heart attack, high or low blood pressure?
- ➤ Have you ever had a stroke?
- Are you subject to fainting, dizziness, nervous disorders or seizures?
- ➤ Have you ever had hepatitis, liver or kidney disease, jaundice, yellow skin?
- ➤ Have you had any health problems not described above?

Core Physical Examination

A current, basic physical examination, suitable for determining information that may be significant to sedation and anesthesia and appropriate to the modality being used, must be carried out for each patient. At a minimum, all modalities of sedation or general anesthesia require the evaluation and recording of significant positive findings related to:

- General appearance noting obvious abnormalities
- Head, neck and intraoral examination, particularly pertaining to airway, such as range of motion, loose teeth, potential obstruction for large tongue, tonsils, etc.
- The taking and recording of vital signs, i.e. heart rate and blood pressure

This can be carried out by most general practitioners and specialists.

If a more in-depth physical examination is required involving:

- Auscultation (cardiac or pulmonary)
- Examination of other physiologic systems
- Other assessments

This examination **must be performed** by a physician or by a dentist who has received formal training in a post-graduate anesthesiology program, or an oral and maxillofacial surgery program.

The core physical examination may include an order for and assessment of laboratory data if indicated.

APPENDIX 11

American Society of Anesthesiology Physical Status Classification System

ASA I: A normal healthy patient

ASA II: A patient with mild systemic disease

ASA III: A patient with severe systemic disease that limits activity but is not

incapacitating

ASA IV: A patient with incapacitating systemic disease that is a constant threat to life

ASA V: A moribund patient not expected to survive 24 hours with or without

operation

ASA E. Emergency operation of any variety; E precedes the number, indicating the

patients' physical status.

APPENDIX 111

Anesthetic Record for Parenteral Conscious Sedation, Deep Sedation or General Anesthesia

An anesthetic/sedation record should contain the following information:

- > Patient name
- > Date of procedure
- ➤ Verification of NPO status
- Verification of accompaniment for discharge
- ➤ Preoperative blood pressure, heart rate and oxygen saturation
- > ASA status
- > Names of all drugs administered
- > Doses of all drugs administered
- > Time of administration of all drugs
- ➤ If used: intravenous type, location of venipuncture, type and amount of fluids administered
- ➤ List of monitors used
- Record of systolic and diastolic blood pressure, heart rate, oxygen saturation at appropriate intervals as described in the Guidelines. If the monitors used provide an automated printout, this printout may be attached in lieu of handwritten recording of these signs.
- > Time of the start and completion of the administration of the general anesthetic/sedation
- ➤ Time of the start and completion of the administration 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 professional responsible for the case
- > A notation of any complication or adverse reaction

SAMPLE ANAESTHETIC RECORD

		Age			_ Date	·				_			
Medical History Reviewed													
AllergiesAccompanie	N	Medications _											
NPOAccompanie	d by Responsible A	Adult											
Pre-op BP Pre-op HR Premedication: IV: Angio or BFGauge	Pre-op 02	St'n		ASA C	lassifi	cation	II	III	IV	V E			
IV: Angio or BFGauge Fluids: Type	_ Site: R L	DOH ACF Volume	FA	Other _									
Fluids: Type Monitors: Pulse Oximeter	BP	ECG	·		_ Oth	er							
DRUG		Time:	o 1	5 30	45	0	15	30	45	0	15	30	45
O ₂ (1/min)			Ī			-							
N ₂ 0 (1/min)													
								-					
Local Anaes: ml of:													
Local Anaes: ml of:		Sa0 ₂ :	<u> </u>										
tart Anaes.		240	Ш		Ш		Ш	Ш	Ш	ПП	T		TIT
tart Procedure:		220	HH	$\pm \pm \pm$						$\pm \pm \pm$	$\pm \pm 1$		
	-	200	HH	+	\mathbb{H}	+++		\mathbb{H}	+++	+	+		+++
nd Procedure:		180	HH	+++	HH	+H	+++	H	+				
nd Anaes:			+++			44		\Box		+	\blacksquare		
o Recovery Room:		160	HH	+H	HH	-1-1-	\overline{H}	Hi	+H	111	\Box		
	BP	v 140				##		\Box	111	##	\blacksquare	+H	
ischarge Criteria:	HR	120		##		+++	Ш	\Box	+	##	+		
riented		100	HH	+		711		\square		#	\mp		
ital Signs Stable:		80	-			##	H	\square		+	\mp	\mp	
		60				111			+	##	##	##	
P HR		pound			111								
mbulatory		40	HH			###			##	##	\mp	+	
mbulatory ischarge Time:		20											
mbulatory		20		5 30	45	0	15	30	45	0	15	30	45
mbulatory ischarge Time:		20	0 1	5 30	45	0	15	30	45	0	15	30	45
mbulatoryischarge Time:ithe company of:		0	0 1	5 30	45	0	15	30	45	0	15	30	45