



Policy Name	<b>Administration of Sedation in Dental Practice</b>
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Developed By	Registration Section DHP/ MoPH
Reviewed by/ Date	Dentist Registration Team
Approved by/ Date	PLC
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## **Validity**

This policy is the main and valid policy until updated, replaced or cancelled by the department of healthcare profession. Update, replacement or cancellation of this policy may occur when needed. However, all healthcare practitioners and parties shall comply with this policy.

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## **1. Introduction**

This policy provides a comprehensive framework for the administration of Nitrous oxide in dental procedures, ensuring patient safety, and adherence to the highest standards of care. providing guidelines for indications, contraindications, training, and safety protocols. It also provides guidance to licensed dentists on performing dental procedures under General Anaesthesia, ensuring collaboration with the anesthesia team and adherence to established safety protocols.

## **2. Policy Statement**

### **2.1 Nitrous Oxide**

This policy outlines the regulated administration of nitrous oxide ( $N_2O$ ) as a minimal sedation technique to manage anxiety and pain in dental settings.  $N_2O$  must be delivered by qualified professionals under strict safety protocols and patient assessment standards. All usage shall comply with applicable clinical guidelines and occupational exposure limits.

### **2.2 General Anaesthesia**

May be administered in dental treatments where local anaesthesia or conscious sedation is not feasible or has failed to provide adequate pain control. This policy aims to guide the licensed Dentists to perform procedures under General Anaesthesia only in accredited healthcare facilities equipped with appropriate surgical and recovery settings. The administration of General Anaesthesia must be carried out exclusively by a licensed anaesthesiologist. A qualified anaesthesia team must remain present throughout the procedure and recovery period to ensure patient safety. Compliance with all institutional and national anaesthesia protocols is mandatory.

### 3. Definitions

Term	Definition
Nitrous oxide (N <sub>2</sub> O)	Commonly known as “laughing gas,” is a colourless, non-flammable gas with a slightly sweet odour and taste. It is used in various fields, including medicine and dentistry, for its anaesthetic and analgesic effects. In dentistry, nitrous oxide is often used for conscious sedation to help patients relax during procedures. It is administered through a mask that delivers a mixture of nitrous oxide and oxygen.
General anaesthesia	A medically induced state of unconsciousness in which the patient is completely unaware and does not feel pain during surgical or diagnostic procedures. It is achieved using a combination of drugs that affect the brain and nervous system, requiring airway support and continuous monitoring of vital functions. General anaesthesia is typically administered by an anaesthesiologist in a healthcare facility that includes the Operating Room (OR) or Procedure Room, depending on the type of surgery or intervention.
Anaesthesia Team	The group of healthcare professionals responsible for the administration and monitoring of anaesthesia including anaesthesiologists.
Dental procedure\privilege	Refers to any treatment or intervention performed by a dentist or dental specialist to diagnose, restore, or maintain oral health.
Dental specialist	Is a licensed dentist who has completed additional education and training in a specific area of dentistry beyond general dental practice. Dental specialists focus on diagnosing, treating, and managing complex oral health conditions related to their expertise.
Core privileges	The clinical procedures within a specialty that any licensed Dentist (General/Specialty) can perform, which are automatically granted upon licensing.
Non-core privileges	The clinical procedures within a specialty that any licensed specialist is automatically granted upon licensing within their specialty, and any licensed dentist with special training courses or postgraduate degree, special skills, and experiences can apply for as a privilege.

#### 4. Abbreviations

Term	Definition
DHP	Department of Healthcare Professions
GD	General Dentist
N <sub>2</sub> O	Nitrous Oxide
CPR	Cardiopulmonary Resuscitation
GA	General Anaesthesia
HCF	Healthcare Facilities
HCP	Healthcare Practitioner
ALS	Advanced Life Support
PLS	Paediatric Life Support

## PART 1: ADMINISTRATION OF NITROUS OXIDE

### 5. Scope

This part applies to all licensed dentists and healthcare facilities that are willing to use nitrous oxide for sedation and analgesia according to the policies applied in DHP.

#### **5.1 The following scopes are entitled to administer Nitrous Oxide without submitting a privilege application to DHP (if they obtained the required proper training during the postgraduate education)**

5.1.1 Paediatric dentistry specialty.

**NOTE:** If paediatric dental specialists did not receive the required training during their postgraduate education, they must complete the necessary training in accordance with DHP criteria. The corresponding training certificate should be retained in the facility's records for auditing purposes.

#### **5.2 The following scopes are eligible to apply for administering Nitrous Oxide by submitting an electronic privilege application via DHP registration system:**

**NOTE:** The process for N<sub>2</sub>O privilege application is exempt from the standard institutional procedure and will be routed exclusively through Departmental Head approval (DHP).

5.2.1 Orthodontics

5.2.2 Periodontics

5.2.3 Endodontics

5.2.4 Prosthodontics

5.2.5 Oral Medicine

5.2.6 Orofacial Pain, (refer to Circular 14/2020)

5.2.7 Restorative Dentistry.

5.2.8 Oral and Maxillofacial Surgery, (refer to Circular 104/2023).

5.2.9 Oral Surgery

#### **5.3 The following scopes are NOT eligible to administer Nitrous Oxide:**

5.3.1 Oral and Maxillofacial Radiology, OMR specialists are entitled to perform only imaging procedures and not for any related clinical procedures as per guidelines for dentists. (Refer to Circular 09/2022).

5.3.2 General dentistry

5.3.3 General dentistry supervised

5.3.4 Assistant specialty

### 5.3.5 Dental public health

**NOTE:** Dentists are permitted to perform dental procedures under nitrous oxide sedation without applying for a privilege, provided that the sedation is administered by a licensed anaesthesiologist in the presence of the anaesthesia team, and the patient remains under the observation of minimum of one qualified anaesthesia team throughout the treatment and until full recovery.

## 6. Eligibility Criteria for N<sub>2</sub>O administration:

The administration of nitrous oxide minimal sedation by a dentist within a healthcare facility shall be permitted only under the following conditions, ensuring compliance with regulatory standards and prioritising patient safety:

### 6.1 Eligibility Criteria for the practitioners involved

#### Licensed Dentist Qualifications

- The administering dentist must hold a valid license and have successfully completed accredited training in nitrous oxide sedation as per the criteria set by the Department of Healthcare Professions (DHP). Reference to point 7.11 Criteria for Training Courses in Minimal Sedation and Nitrous Oxide (N<sub>2</sub>O) Administration in this policy.
- The licensed dentist administering nitrous oxide must not work alone. One of the following qualified professionals must be assisting with the sedation procedure:
  - A licensed dentist trained in N<sub>2</sub>O sedation.
  - A registered general nurse trained in N<sub>2</sub>O sedation, performing under the dentist's direction.
  - A respiratory therapist trained in N<sub>2</sub>O sedation, performing under the dentist's direction.
  - A Dental hygienist or dental assistant (holders of bachelor's degree only) trained in N<sub>2</sub>O sedation, performing under the dentist's direction.
- Nitrous oxide sedation must involve a minimum of two qualified healthcare professionals. Other than the dental nurse/assistant.
- The dentist must be always physically present in the facility and immediately available in case of emergency.
- All staff involved must be trained in (ALS)/ (PLS for pedodontist and assisting staff) and emergency response protocols.

### 6.2 Eligibility Criteria for the healthcare facility

#### Health Facility Requirements

- The facility must comply with all the requirements of the Health Facility Department in relation to use of Anaesthesia and Sedation in Dental service.
- The healthcare facility must be equipped with appropriate clinical infrastructure to support the safe administration of nitrous oxide. This includes:

**A. Dedicated and Safe Treatment Environment**

- o Sedation procedures must be conducted in a designated operator designed for continuous patient monitoring.
- o The room must be adequately ventilated.
- o The layout must allow unobstructed access to emergency equipment and facilitate efficient staff movement.

**B. Certified Gas Delivery System:**

- o A dual-flow system capable of delivering controlled concentrations of nitrous oxide and oxygen must be used.
- o The nitrous oxide delivery system must include a fail-safe mechanism to ensure oxygen is delivered at a minimum concentration of 30% and halts nitrous oxide flow if oxygen delivery is interrupted.
- o Safety features such as pin-indexed and diameter-indexed connections must be in place to prevent incorrect gas cylinder attachment.
- o Flowmeters must be calibrated and maintained to deliver accurate gas concentrations and capable of maintaining oxygen levels above 30%.
- o Pressure regulators and check valves must be installed to ensure consistent gas flow and prevent backflow.
- o Audible and visual alarms must be present to alert staff of system malfunctions.

**C. Patient Interface Equipment:**

- o A range of nasal masks in various sizes must be available to ensure a secure and comfortable fit for all patients.
- o Masks must provide an airtight seal while allowing for effective monitoring and communication.

**D. Scavenging and Ventilation Systems:**

- o A manufacturer-approved scavenging system must be installed to capture excess nitrous oxide and reduce occupational exposure.
- o Exhaust systems must vent externally, away from fresh air intakes, in compliance with air quality standards.
- o Ambient nitrous oxide levels must be monitored regularly and maintained below the recommended exposure limit (typically 25 ppm) for maximum of 8 hours during a day.

**E. Emergency Preparedness:**

- o The operation must be equipped with emergency oxygen, suction apparatus, drugs and resuscitation equipment.
- o Emergency equipment must be inspected routinely and remain readily accessible during sedation procedures.

- o A portable emergency oxygen unit (e.g., “wheel-out”) must be available and accessible in the operatory.
- o Portable systems must include a “4-yoke” configuration to ensure a reserve oxygen supply is always connected.
- o Centralised systems must have at least two oxygen cylinders connected at all times.
- o Written emergency protocols should be reviewed regularly. (refer to appendix 1)
- o Regular training and drills for the dental team to respond effectively to emergencies.

**F. Compliance, Certification and Authorisation:**

- o Policies and procedures must be in place to ensure adherence to applicable regulatory and professional standards (to comply with point 9.4 in this policy)
- o All equipment must be certified for medical use and comply with local and international safety standards.
- o Staff must be trained in proper use, troubleshooting, and emergency procedures related to nitrous oxide equipment.

**G. Maintenance and Documentation:**

- o All equipment must be maintained according to manufacturer specifications or more frequently if required.
- o Routine leak testing must be conducted to verify the integrity of tubing, connectors, and reservoir bags.
- o Maintenance, calibration, and servicing activities must be documented and available for inspection.

**7. Privilege application Requirements for N<sub>2</sub>O administration: a licensed dentist is required to submit a privilege application with the following:**

- 7.1. DHP Privilege template (if available) or request letter for administering N<sub>2</sub>O.
- 7.2. Copy of Academic qualifications.
- 7.3. Copy of Curriculum - Vitae (C.V.) in DHP format.
- 7.4. Recommendation letters (if any).
- 7.5. Copy of the previously granted privileges (if applicable).
- 7.6. Copy of training certificate/courses attended in the requested privilege.
- 7.7. ALS/PLS courses.
- 7.8. Any documents required to support the application that is not mentioned above must be submitted upon request.
- 7.9. Courses certificates should be verified through DHP approved primary source verification companies.

7.10. Criteria for Training Courses in Nitrous Oxide (N<sub>2</sub>O) Administration:

- i) The courses should be Onsite master class (in campus). (can be as 1 course or more than one course).
- ii) The course should include:
  - (a) A minimum of 8 accredited hours didactic session.
  - (b) In addition to 8 accredited hours Hands-on clinical training sessions: A logbook that includes at least 10 supervised cases of nitrous oxide sedation should be provided. should be verified through DHP approved primary source verification companies.
- iii) Course content/Main topics to be covered during the course: Anatomy, physiology, pharmacology/ patient assessment and case selection criteria/Medical history taking/sedation techniques & administration/Dosages & levels of sedations/Identifying indication & contraindication/management of emergency & post administration complication/ pre-operative patient Preparation/ post-procedure care/ monitoring/ gas delivery, ventilation & scavenging systems. / Equipment handling and safety.
- iv) Official documents showing course duration, type of course and subjects covered in the course should be provided in the application.

**8. Guidelines and procedures for administering Nitrous Oxide in dental practice:**

The following professional responsibilities apply when nitrous oxide and oxygen sedation is administered. The dentist should work in proper N<sub>2</sub>O clinical set-ups to accommodate the following in addition to other recognised measurements in this regard:

**8.1. Patients' Assessment & Selection Criteria:**

Dentist should apply thorough assessment to determine the medical history, indications and contraindications of N<sub>2</sub>O:

**8.1.1. Patient's Medical History:**

An adequate, clearly recorded current medical history, including present and past illnesses, hospital admissions, laboratory investigations, current medications and dose, allergies (in particular to drugs), and a functional inquiry, along with an appropriate physical examination must be completed for each patient and must form a permanent part of each patient's record. For medically compromised patients, consultation with their physician is indicated.

**8.1.2. Indications for Nitrous Oxide Sedation:**

- Anxiety and fear reduction associated with dental procedures.
- Pain management during dental procedures.
- Relaxation & comfort during dental procedures.
- Paediatric patients (up to 12 years -age as defined in American Academy of Paediatrics) help children feel more comfortable and relaxed during dental procedures.
- Patients with special needs such as autism or intellectual disabilities. (to be treated by paediatric dentists only).

8.1.3. Contraindications for nitrous oxide sedation include:

- Respiratory conditions: Patients with severe respiratory conditions, such as (but not limited to) chronic obstructive pulmonary disease (COPD), & Abnormalities of the respiratory system.
- Neurological conditions: Patients with certain neurological conditions, such as (but not limited to) multiple sclerosis or Parkinson's disease.
- Pregnancy and breastfeeding.
- Vitamin B12 deficiency (based on patient age, medical history, chronic diseases)
- Psychological conditions: certain psychological conditions, such as (but not limited to) anxiety disorders or substance abuse.
- Blockage or obstruction in the nasal passages or sinuses.
- Middle Ear Disturbances: such as (but not limited to) otitis media or recent ear surgery.

**Note:** It is an absolute contraindication for any patient with congenital respiratory anomalies

## **8.2. Informed & signed Consent:**

Obtain informed consent from patients or their guardians, explaining the benefits, risks, and alternatives to nitrous oxide sedation and what to expect during administration. The patient, parent, guardian, or caregiver must be advised about the procedure and provide written signed consent for the proposed sedation.

## **8.3. Pre-Operative patient Preparation: This includes:**

- Determining adequate oxygen supply,
- Obtaining baseline vital signs and providing pre-operative verbal and written instructions.
- Obtaining blood tests and chest x-ray results to exclude any contraindications.
- Patients should be given instructions not to eat or drink for 2 hours prior to their appointment.

## **8.4. Administration of Nitrous Oxide equipment & procedures:**

8.4.1. Equipment Preparation Prior to Sedation: Before initiating nitrous oxide sedation, the following preparatory steps must be undertaken:

- The entire nitrous oxide delivery system must be thoroughly checked to confirm proper functionality.
- The nasal mask should be selected and fitted to the patient to ensure both comfort and an effective seal, which is essential for optimal gas delivery and patient safety.

8.4.2. Administration of Nitrous Oxide procedure:

- a. Initiation Phase: Begin with 100% oxygen for 3–5 minutes to establish baseline and comfort.
- b. Titration Phase: Gradually introduce nitrous oxide:
  - Start at 10% N<sub>2</sub>O and increase by 5–10% every 1–2 minutes.
  - Monitor patient response continuously.
  - Maintain oxygen concentration ≤ 50%.
  - Do not exceed 50% N<sub>2</sub>O.

- o The concentration of (N<sub>2</sub>O) administered must not fall below 10% and must not exceed 50% under any circumstances.

#### 8.4.3. Monitoring:

- It is recommended Not to subject the patient for more than 1 hour of Sedation time.
- Patients receiving nitrous oxide and oxygen sedation must never be left unattended during administration. Patients must be supervised by an appropriately trained dentist, or an appropriately trained nurse or respiratory therapist under the direction of trained dentist.
- During the procedure, monitoring of physiologic variables shall be done every five (5) minutes and shall include at least the following:
  - i. Blood pressure and heart rate.
  - ii. Level of sedation (response to verbal commands) except in patients who are unable to respond appropriately e.g., young children, mentally ill and uncooperative patients, or during the procedure where movement could be detrimental.
  - iii. Respiratory rate and adequacy of ventilation (by observation/ auscultation).
  - iv. Oxygen saturation by pulse oximetry (continuously).
  - v. Temperature, before anaesthesia and every 30 min until the end of the procedure.
- The practitioner must not be alone while treating a sedated patient.

#### 8.5. Patient Records:

Records of the sedation procedure must be kept to a minimum, including the following information:

- Pre-operative review of the patient's medical history for any changes.
- Pre-operative blood pressure and pulse.
- Total flow of nitrous oxide and oxygen.
- Percentage and duration of administration of nitrous oxide.
- Duration of administration of 100% oxygen at the end of the sedation procedure.
- Notation regarding the patient's tolerance of the sedation procedure.
- Patient's signed consent.
- Patients related medical Complications during and post procedure.

#### 8.6. Recovery status post-operatively:

8.6.1. Termination and Discontinuation: Stop nitrous oxide and administer 100% oxygen for 3–5 minutes.

##### 8.6.2. Recovery Assessment:

- Ensure patients returns to baseline cognitive and physiological state.
- Confirm SpO<sub>2</sub> remains ≥90%.
- Ask the patient to rate comfort and alertness.

- 8.6.3. Provide instructions for post-procedure care, including any potential side effects and when to seek medical attention.
- 8.6.4. Recovery status post-operatively must be specifically assessed and recorded by the dentist, who must remain in the facility until that patient is fit for discharge.
- 8.6.5. Only fully recovered patients can be considered for discharge unaccompanied. If discharge occurs with any residual symptoms, the patient must be accompanied by a responsible adult.
- 8.6.6. Discharge criteria are based on ALDERT score (refer to appendix 2).

## **8.7. Common Post-Operative Complications of Nitrous Oxide Minimal Sedation:**

### **8.7.1. Nausea and Vomiting**

- Most common side effect, especially if the patient has eaten recently.
- Management: Ensure fasting guidelines are followed pre-procedure. Post-op, provide antiemetics if needed and monitor hydration.

### **8.7.2. Headache**

- May result from prolonged exposure or improper gas mixture.
- Management: Administer oxygen for 3–5 minutes post-procedure to flush out residual nitrous oxide. Encourage rest and hydration.

### **8.7.3. Dizziness or Light-headedness**

- Often transient and related to rapid changes in gas concentration.
- Management: Gradual weaning off nitrous oxide and administration of 100% oxygen post-op.

### **8.7.4. Fatigue or Drowsiness**

- Mild sedation effects may linger for minutes up to 1 hour.
- Management: Allow the patient to rest until fully alert. Avoid discharging until they meet recovery criteria.

### **8.7.5. Shivering or Chills**

- Rare but can occur due to vasodilation and temperature regulation changes.
- Management: Provide blankets and monitor temperature.

### **8.7.6. Vitamin B12 Inactivation (Rare but Serious)**

- Chronic exposure can inactivate B12, leading to neurological issues.
- Management: Screen patients with B12 deficiency or related conditions. Avoid repeated exposure in susceptible individuals.

## 8.8. Misuse And Chronic Exposure

- Any instance of nitrous oxide (N<sub>2</sub>O) misuse within healthcare facilities shall be promptly reported to DHP & appropriate regulatory authorities, in accordance with established oversight and compliance protocols.
- Ongoing maintenance of scavenging and ventilation systems shall be rigorously upheld to prevent chronic occupational exposure among healthcare personnel, in alignment with established occupational safety protocols.
- All cases of chronic occupational exposure must be formally reported through the appropriate channels. Remedial measures shall be undertaken promptly to mitigate risks and ensure compliance with established health and safety standards.
- Upon confirmation of N<sub>2</sub>O misuse by any practitioner, the privilege to administer N<sub>2</sub>O shall be promptly suspended for this practitioner. The incident must be reported without delay to (DHP).

## PART 2: DENTAL TREATMENT UNDER GENERAL ANAESTHESIA

### 9. Scope

This part applies to all licensed dentists and healthcare facilities that are willing to perform dental treatment under General Anaesthesia according to the policies applied in DHP.

#### 9.1 The following scopes are entitled to perform dental treatment (within their scope of practice) under GA by default:

- i. General Dentists. However, GDs are not eligible to treat Paediatric patients under General Anaesthesia.
- ii. Dental Specialists.

#### 9.2 The following scopes are NOT eligible to perform dental treatment under GA:

- iii. GD supervised.
- iv. Assistant specialists.
- v. Public health specialists.
- vi. Oral & maxillofacial radiology specialists.

**NOTE:** Eligible dentists can perform only their core, non-core, and advanced dental procedures under GA.

### 10. Eligibility Criteria for performing dental treatment under GA:

**NOTE:** Dentists will perform dental procedures only, while anaesthesiologists and anaesthesia team will be completely in charge of administering GA, patient monitoring and recovery.

#### 10.1. Eligibility Criteria for the healthcare facility

- Must be an accredited healthcare facility equipped with an Operating Room (OR) and a Post-Anaesthesia Care Unit (PACU) for patient recovery.
- Availability of emergency resuscitation equipment and continuous monitoring systems.

#### 10.2. Anaesthesia Team Requirements:

- General Anaesthesia must be administered exclusively by a licensed anaesthesiologist.
- A qualified anaesthesia support team (e.g., anaesthesia nurse or respiratory therapist trained in GA) must be present throughout the procedure and recovery.

### **10.3. Dentists' requirements:**

- Dentists must hold a valid license issued by DHP and collaborate with the patient's physician to rule out any medical contraindications or potential risks prior to treatment. However, dentists are not required to submit any privilege application to perform dental treatment under GA.

### **10.4. Compliance:**

Full adherence to national and institutional anaesthesia safety protocols and patient monitoring standards.

## **11. Guidelines for Performing Dental Procedures Under General Anaesthesia (GA):**

Dentists may perform procedures under GA only in collaboration with multidisciplinary healthcare practitioners, including the Anaesthesia Team and the patient's physician, ensuring that GA is administered exclusively by a licensed anaesthesiologist with the support of a qualified anaesthesia team. The following criteria and protocols must be observed, along with other recognised standards:

### **11.1. Patient Selection Criteria:**

- 11.1.1. Comprehensive evaluation of the patient's medical history
- 11.1.2. Assessment of the necessity for GA based on the complexity of the dental procedure and patient cooperation levels.
- 11.1.3. Special consideration for patients with special needs, severe anxiety, or medical conditions that necessitate GA.

### **11.2. Indications for General Anaesthesia: GA is used in dentistry for patients who require complete unconsciousness during procedures. Common indications (but not limited to) include:**

- 11.2.1. Extensive Surgical Procedures: Complex oral surgeries such as jaw reconstruction or multiple extractions.
- 11.2.2. Severe Anxiety or Phobia: Patients with extreme dental anxiety or phobia unmanageable by conscious sedation.
- 11.2.3. Special Health Care Needs: Patients with physical, cognitive, or developmental conditions prevent treatment while conscious.
- 11.2.4. Uncooperative Paediatric Patients: Young children unable to cooperate during dental treatments.

### **11.3. Contraindications of General Anaesthesia: Dentists must consider known contraindications (but not limited to) such as:**

- 11.3.1. Severe chronic obstructive pulmonary disease (COPD)
- 11.3.2. Pulmonary hypertension.
- 11.3.3. Recent vitreoretinal surgery.
- 11.3.4. Severe cardiac conditions.

#### **11.4. Pre-Anaesthetic Evaluation:**

- 11.4.1. Mandatory pre-anaesthetic consultation to assess risks and benefits of GA.
- 11.4.2. Evaluation of current medical status, medications, allergies, and previous anaesthesia reactions.
- 11.4.3. Fasting and medication instructions provided prior to the procedure.

#### **11.5. Informed Consent:**

- 11.5.1. Detailed explanation of GA procedure, risks, and post-operative care requirements
- 11.5.2. Written informed consent obtained from the patient or legal guardian.

#### **11.6. Anaesthesia Team:**

- 11.6.1. GA must be administered only by a licensed anaesthesiologist.
- 11.6.2. Continuous presence of the anaesthesia team throughout the procedure and recovery to monitor vital signs and anaesthesia depth.

#### **11.7. Facility Standards:**

- 11.7.1. GA procedures must be performed in licensed facilities equipped with anaesthesia delivery systems and emergency equipment.
- 11.7.2. Availability of a dedicated recovery area (PACU) for post-anaesthesia monitoring

#### **11.8. Anaesthesia Administration:**

Adherence to standardised protocols for induction, maintenance, and emergence from GA.

#### **11.9. Emergency Protocols:**

- 11.9.1. Clear protocols for managing anaesthesia-related complications
- 11.9.2. Regular training and drills for dental and anaesthesia teams
- 11.9.3. CPR-trained team availability.

#### **11.10. Documentation and Record Keeping:**

- 11.10.1. Detailed documentation of anaesthesia processes, including dosages, vital signs, and complications.
- 11.10.2. Secure storage of records in compliance with privacy regulations.

## **12. Important Notes for Practicing Dentistry Under Sedation:**

- 12.1. The above guidelines represent a generalised overview of the best international practices; however, all eligible dentists and involved healthcare professionals must remain fully informed and continuously updated on current medical standards and regulatory requirements in this field.
- 12.2. Licensed dentists are permitted to perform only their approved core and non-core privileges under sedation.
- 12.3. Regular audits and reviews of sedation practices shall be conducted by DHP to ensure strict compliance with established policies and guidelines.
- 12.4. Healthcare facilities must implement corrective actions and improvements based on audit findings and align with the latest evidence-based practices.
- 12.5. The facility must be fully equipped with appropriate emergency equipment and medications to manage potential complications following sedation.

## **13. Related Policies & Circulars:**

- 13.1. Guidelines for dentists.
- 13.2. Circular No (DHP/2024/13) – Launching the electronic application for surgical/dental privileges through the Department of Healthcare Professions' Registration/Licensing System.
- 13.3. Circular No (DHP/2024/19) – Updates on Dental Specialties Registration/Licensing.
- 13.4. Circular No (DHP/2023/104) – Updates on registration and licensing policy for Oral and Maxillofacial Surgery scope of practice.
- 13.5. Circular (14-2020) – Approval of “Orofacial Pain” scope within the Dental specialty scopes
- 13.6. Circular (9-2022) – Introducing a New Specialty in the Field of Oral & Maxillofacial Radiology
- 13.7. Circular (11/2022) – Directives on Stopping the Use of Nitrous Oxide Immediately in all Private Sector Dental Practices in the State of Qatar.
- 13.8. Outpatient Licensing requirements.

#### 14. References:

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4. <ADA.org: Guidelines for the Use of Sedation and General Anaesthesia by Dentists>
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## Appendix 1: Related Medical Emergency Protocols:

### Related Medical Emergency Protocols:

#### 1. Laryngospasm

- If the patient develops stridor attempt airway repositioning, gently try suctioning any secretions and apply a high flow oxygen mask with a reservoir bag.
- If the patient is saturating continue the procedure.
- If the stridor gets worse or the patient starts de-saturating let the patient breathe oxygen via a bag-valve-mask. Stop the procedure.
- If de-saturation reaches below 92% start gentle bag-valve-mask ventilation.
- If the stridor worsens further or complete airway obstruction occurs, a dose of Suxamethonium of 2mg/kg IV (or 4mg/kg IM) should be given. This should be followed by tracheal intubation and an urgent call for senior anaesthetic assistance. Continue to ventilate gently.

#### 2. Emergency reactions

- If the patient is suffering severe emergency reactions, and is significantly distressed, then small increments of midazolam should be given in doses of 0.05 – 0.1 mg/kg.
- If intractable vomiting occurs post procedure, consider use of IV Ondansetron in a dose of 0.1mg/kg (maximum of 4mg) by slow intravenous injection.

#### 3. Emergency Equipment and Drugs

- full face masks of appropriate sizes and connectors
- Defibrillator/AED
- current drugs in appropriate amounts for management of emergencies, including:
  - oxygen (an E-size cylinder is required)
  - 1:1,000 epinephrine (at least 2 doses are required, ampules or auto-injectors)
  - nitro-glycerine
  - parenteral diphenhydramine
  - salbutamol - flumazenil
  - acetylsalicylic acid (ASA, non-enteric coated)
  - Hydrocortisone, Methylprednisolone or Dexamethasone.
  - Naloxone
  - Midazolam

## Appendix 2

The Modified Aldrete scoring is assessed accordingly:

1. At entry of recovery phase.
2. Every fifteen (15) minutes two (2) times.
3. Every (30) minutes until discharge.

Time	Activity								
<b>Activity</b>									
<b>Able to move all extremities</b>									
	2								
<b>Able to move 2 extremities</b>									
	1								
<b>No movements</b>									
	0								
<b>Respiration</b>									
<b>Able to breathe deeply, cough</b>									
	2								
<b>free Limited respiratory effort, dyspnoea</b>									
	1								
<b>Apnoeic</b>									
	0								
<b>Circulation: Pre-procedure Blood Pressure</b>									
<b>blood pressure +/- 20% of pre-anaesthesia level</b>									
	2								
<b>blood pressure +/- 20%-49% of pre-anaesthesia level</b>									
	1								
<b>blood pressure ± 49% of pre-sedation level</b>									
	0								
<b>Consciousness</b>									
<b>Fully awake</b>									
	2								
<b>Arousable when called</b>									
	1								
<b>Not responding</b>									
	0								
<b>Oxygen Saturation</b>									
<b>SpO<sub>2</sub> &gt; 92% on AIR</b>									
	2								
<b>SpO<sub>2</sub> &gt; 90% on O<sub>2</sub></b>									
	1								
<b>SpO<sub>2</sub> &lt; 90% on O<sub>2</sub></b>									
	0								
<b>Total score</b>									
A score of $\geq 9$ generally indicates that the patient is ready for discharge.									
A score of $< 9$ typically suggests that the patient requires further monitoring and management.									





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