

Submission on the Draft Sedation Practice Standard 2026 To the Dental Council of New Zealand (DCNZ) from the New Zealand Society for Sedation in Dentistry (NZSSD)

CONTENTS

PART 1: EXECUTIVE SUMMARY & RECOMMENDATIONS

- Endorsements and Strategic Objectives
- Master Summary of Recommendations

PART 2: CRITICAL DEFICIENCY ANALYSIS

- Deficiency 1: Pharmacology (Oral Midazolam & Triazolam)
- Deficiency 2: Staffing Inadequacy (The Scenario 1 Shared Assistant)
- Deficiency 3: Monitoring Void (Mandatory Capnography)
- Deficiency 4: Inappropriate Inclusion of Methoxyflurane
- Deficiency 5: Emergency Drugs and Resuscitation Terminology

PART 3: TECHNICAL & MINOR AMENDMENTS

- Nomenclature, Academic Qualifications, and Clinical Protocols

CONCLUSION

SUBMISSION TO THE DENTAL COUNCIL OF NEW ZEALAND (DCNZ)

TO: Dental Council of New Zealand (DCNZ)

FROM: New Zealand Society for Sedation in Dentistry (NZSSD)

DATE: 15 February 2026

SUBJECT: SUBMISSION ON THE DRAFT SEDATION PRACTICE STANDARD 2026

PART 1: EXECUTIVE SUMMARY & ENDORSEMENT

The New Zealand Society for Sedation in Dentistry (NZSSD) welcomes the opportunity to submit on the Draft 2026 Sedation Practice Standard. We acknowledge the Council's intent to modernise the regulatory framework and ensure it remains fit for purpose.

We commend the Council for several significant advancements in this draft that directly enhance patient safety and clinical governance. Specifically, we formally endorse:

- **The Paediatric Restriction:** The explicit prohibition of sedation for children under 3 years of age by general practitioners, aligning New Zealand with international best practice.
- **The Risk Assessment Framework:** The introduction of Appendix A (Case Complexity & Patient Risk Assessment) as a vital tool for ensuring appropriate case selection.
- **Case Log Requirements:** The mandate for formal case logs ensures ongoing currency and competency, a standard the NZSSD endorses and encourages.

AREAS OF CRITICAL DEFICIENCY

However, the NZSSD has identified several **CRITICAL DEFICIENCIES** in the Draft Standard. It is our submission that specific provisions within the Draft represent a regression from the 2017 Standard and deviate from the safety guidelines established by the **Australian and New Zealand College of Anaesthetists (ANZCA PG09(G))**, the **Scottish Dental Clinical Effectiveness Programme (SDCEP)**, the **Society for the Advancement of Anaesthesia in Dentistry (SAAD)**, and the **American Society of Anesthesiologists (ASA)**.

We respectfully remind the Council that under **Right 4(4)** of the *Code of Health and Disability Services Consumers' Rights*, patients are entitled to "services of an appropriate standard." By permitting staffing and monitoring ratios below the established benchmarks of ANZCA and SDCEP for potent sedative agents, the Draft Standard risks exposing practitioners to liability for failing to meet the accepted standard of care.

SUMMARY OF RECOMMENDATIONS

Deficiency Area	Key Recommendation Summary
<p>1. Pharmacology & Risk Classification</p>	<p>Reclassify Oral Midazolam and Triazolam as Moderate Sedation. Classification must be based on drug potency and pharmacokinetic unpredictability, not just route or dose count. Restrict the "Minimal Sedation" category strictly to low-potency agents (Diazepam, similar agents) and Nitrous Oxide.</p>
<p>2. Clinical Staffing (Scenario 1)</p>	<p>Eliminate Scenario 1 (Operator + 1 Assistant) for all benzodiazepine-based sedation. Mandate Scenario 2 (Dedicated Monitor) for any agent where airway reflexes are not reliably preserved, ensuring compliance with ANZCA PG09(G) and preventing task saturation.</p>
<p>3. Physiological Monitoring</p>	<p>Mandate Capnography for all Midazolam and Triazolam administrations. Relying on pulse oximetry for potent, non-titratable agents creates a significant safety gap; ventilation monitoring must be the standard to detect latent respiratory depression before desaturation.</p>
<p>4. Inhalational Agents</p>	<p>Remove Methoxyflurane (Penthrox) entirely. As an off-label analgesic with known nephrotoxicity risks and no effective dental scavenging solutions, its inclusion represents a significant regression in occupational and patient safety.</p>
<p>5. Resuscitation & Emergency Drugs</p>	<p>Reinstate the Mandatory Minimum Emergency Drug List. Mandate the inclusion of Adrenaline 1:10,000 for safe IV titration and replace the term "Medicines" with "Emergency Drugs" to align with NZRC crisis terminology.</p>
<p>6. Training & Technical Precision</p>	<p>Standardise professional and academic terminology throughout. Correct society nomenclature to "NZSSD," define qualifications as "primary recognised dental degrees," and mandate a "responsible adult" escort for all discharges to ensure patient safety post-procedure.</p>

PART 2: CRITICAL DEFICIENCY ANALYSIS

DEFICIENCY 1: PHARMACOLOGICAL DEFICIT (ORAL MIDAZOLAM & TRIAZOLAM)

The Issue: The Draft Standard (Standard 10) classifies "*Single dose of a single oral agent*" as **Minimal Sedation** based solely on the *route* of administration and *number of doses*. The NZSSD seeks urgent clarification from the Council regarding the pharmacological rationale for the disparate treatment of agent potency based on the delivery route. Specifically, we question why **Midazolam**—a potent benzodiazepine with a narrow therapeutic index—is classified as suitable for 'Minimal' sedation when administered via the **less predictable oral route**, yet is correctly categorised as 'Moderate' when administered via the **more predictable and titratable intravenous route**. This classification creates a regulatory inconsistency where a technique with higher pharmacokinetic variability is managed with lower staffing and monitoring safeguards, directly contradicting the fundamental principles of safe procedural sedation.

A. THE REGULATORY REGRESSION (GAP ANALYSIS)

2017 Standard (Current)	2026 Draft Standard (Proposed)
Did not explicitly categorize specific drugs. Focused on the <i>intent</i> and <i>effect</i> .	Standard 10 (Page 20): Explicitly categorizes " <i>Single dose of a single oral agent</i> " as Minimal Sedation (Scenario 1).
Guidance: Allowed oral sedation for minimal/moderate provided the <i>team</i> was appropriate. Focus on depth.	Standard 6 (Guidance): " <i>Use oral sedation (limited to a single dose and single drug) only for an intended level of minimal sedation.</i> "
Impact: Implicitly allowed potent agents like Midazolam to be treated with caution.	Impact: Explicitly permits a 15mg dose of Oral Midazolam to be administered under "Minimal Sedation" staffing rules (Operator + 1 Assistant, No Capnography).

B. CLINICAL SAFETY IMPACT: THE "ROUTE PARADOX"

The Draft Standard creates a significant regulatory anomaly where the safety requirements for a drug are determined by its *route* rather than its *potency*.

- **The Paradox:** If a clinician administers **IV Midazolam** (titrated 1mg at a time), it triggers **Moderate Sedation** rules (3 Staff, Additional training, Capnography). If the same clinician administers **Oral Midazolam** (a 15mg unretrievable bolus), it is classified as **Minimal Sedation** (2 Staff, No Capnography, differing training requirements).
- **The Ambiguity:** The Draft Standard's "Single Dose" rule is clinically unworkable because there is no standard "Adult Oral Dose." Is a single dose **7.5mg? 15mg?** Or a whole ampoule?
- This classification contradicts established pharmacokinetic principles. The Oral Route for Midazolam is **inherently less safe** than the IV route due to:

1. Bioavailability Variance & CYP3A4 Metabolism

- *Heizmann et al.* and *Greenblatt et al.* confirm that the oral bioavailability of Midazolam ranges widely from **30% to >70%** due to inter-individual variability in hepatic and intestinal **CYP3A4** enzyme activity amongst other factors. A fixed 15mg oral dose may produce negligible sedation in a "fast metabolizer" but **deep sedation** in a "poor metabolizer." Without the ability to titrate, this variability creates a foreseeable risk of "overshoot" into deep sedation, which cannot be managed safely by a minimal sedation team.

2. The "Off-Label" Regulatory Gap

- **Lack of Licensed Formulation:** There is **no licensed oral formulation of Midazolam for adults** in New Zealand. Practitioners using this technique are typically utilizing **Paediatric Syrup** (2mg/mL) or administering **IV Ampoules** (15mg/3ml) orally.
- **NZ Formulary / Medsafe Datasheet:** The *Hypnovel (Midazolam)* datasheet explicitly lists "Oral" administration only for paediatric premedication, not adult procedural sedation.
- **The Risk:** Without a defined dose limit, a practitioner could legally administer a massive 15mg bolus under "Minimal" staffing rules, creating a high risk of airway compromise without adequate training or staffing to manage the ensuing respiratory depression.

3. Steep Dose-Response Slope

- **Fact:** Pharmacodynamic studies demonstrate that Midazolam and Triazolam possess a **steeper dose-response slope** compared to Diazepam. The therapeutic window between "anxiolysis" and "loss of protective reflexes" is significantly narrower.

C. INTERNATIONAL BENCHMARKING

Authority	Classification of Oral Midazolam/Triazolam	Requirement
UK (SDCEP)	"Advanced Technique"	Requires training equivalent to IV sedation; distinct from "Basic" techniques like N2O.
UK (SAAD)	Restricted / Advanced	Discourages oral midazolam in Primary Care; emphasises IV titration as the gold standard.
Australia (ANZCA)	Procedural Sedation	PG09(G) mandates a dedicated assistant for monitoring for <i>any</i> sedation beyond anxiolysis.
Canada (RCDSO)	Moderate Sedation	Classifies oral sedation with Triazolam/ Midazolam as requiring specific authorization and monitoring.

Recommendation 1:

Amend **Standard 10** to classify **Oral Midazolam and Triazolam** as **MODERATE SEDATION** techniques (requiring capnography & dedicated monitoring), regardless of dose count.

Recommendation 2:

Restrict the "Minimal Sedation" category (Operator + Assistant) strictly to **Oral Diazepam** (or similar low-potency agents) and **Inhalational Nitrous Oxide**, due to their high predictability and wide therapeutic margin.

References for Deficiency 1:

1. Heizmann P et al. "Absolute bioavailability of midazolam." *Br J Clin Pharmacol*. 1983;16:43S-49S.
2. Greenblatt DJ et al. "Acquisition of 'tolerance' to the sedative effects of benzodiazepines." *Anesthesiology*. 1989;70(6):937-43.
3. Medsafe New Zealand. *Hypnovel (Midazolam) Datasheet*. Auckland: Roche Products (New Zealand) Ltd.
4. SDCEP. *Conscious Sedation in Dentistry: Dental Clinical Guidance (3rd Ed)*. 2017.
5. ANZCA (Australian and New Zealand College of Anaesthetists). *PS09(G) – Guideline on Procedural Sedation (2023)*.

DEFICIENCY 2: STAFFING INADEQUACY ("SCENARIO 1")

The Issue: Standard 10 (Page 20) permits **Scenario 1** staffing for Minimal Sedation (Single Oral Dose). This allows a single assistant to concurrently assist the operator and monitor the patient.

A. THE REGULATORY REGRESSION & ANZCA ALIGNMENT GAP

Staffing Feature	DCNZ Draft (Proposed)	ANZCA PG09(G) (2023)
Assistant Role	Shared Role: Assistant "primarily monitors and assists operator."	Dedicated Role: Assistant must be "exclusively available to monitor the patient." ¹
Task Delegation	Explicitly permits Dual-Tasking (Monitoring + Suctioning).	Forbids task delegation that compromises Continuous Monitoring . ²
Crisis Capacity	Limited to a 2-Person Team .	Assumes a 3-Person Minimum for Moderate Sedation risk.

¹ **PG09(G) Sec 7.2:** Mandates that for procedural sedation, a designated assistant must be present to monitor the patient's condition. ² **PG09(G) Sec 5.2.1:** Emphasizes that the sedationist is responsible for monitoring "irrespective of any task delegation."

B. CLINICAL SAFETY IMPACT: HUMAN FACTORS & TASK SATURATION

The NZSSD rejects the "Shared Assistant" model for any agent other than Nitrous Oxide, based on the following **Human Factors** principles:

- **Task Saturation:** During a dental procedure, the assistant is frequently occupied with fluid management (suctioning), instrument transfer, and retraction. These tasks require significant cognitive and visual focus.
- **The Monitoring Gap:** Monitoring a sedated patient requires the continuous assessment of **work of breathing** and **airway patency**. If the assistant's attention is diverted to a procedural task, there is a quantifiable risk of missing the early signs of airway obstruction or hypoventilation.
- **Failure to Rescue:** In a crisis (e.g., laryngospasm or aspiration), a 2-person team is physically and cognitively incapable of performing simultaneous airway rescue, pharmacological intervention (reversal), and emergency communication.

C. CLINICAL CONTEXT: MIDAZOLAM & THE AIRWAY

As established in **Deficiency 1**, a 15mg dose of Midazolam targets a state of depressed consciousness. Under these conditions, airway reflexes are not reliably preserved. Permitting a "Shared Assistant" in this scenario deviates from the safety floor established by medical colleagues and increases the risk of preventable iatrogenic harm.

D. REQUIRED REMEDY

Recommendation 3: Scenario 1 (Operator + 1 Shared Assistant) must be **restricted exclusively** to Nitrous Oxide sedation.

Recommendation 4: Scenario 2 (Operator + Dedicated Monitor + Assistant) must be the **mandatory minimum for any sedation involving Midazolam or Triazolam**, regardless of the route. This aligns the Standard with This ensures patient safety is not compromised by staffing constraints.

DEFICIENCY 3: THE MONITORING VOID (CAPNOGRAPHY)

The Issue: Standard 12 mandates Capnography *only* for "intended level of moderate sedation." Because Oral Midazolam is classified as "Minimal" (Deficiency 1), it is currently **exempt**.

A. THE CLINICAL RISK

- **Unintended Depth:** Oral Midazolam is unpredictable; intended "Minimal" sedation often progresses to a "Moderate" level in high absorbers.
- **Latency of Pulse Oximetry:** Pulse oximetry detects hypoxia (a late sign). Capnography detects hypoventilation immediately, providing the requisite safety net for potent agents where respiratory depression is a foreseeable risk.

B. REQUIRED REMEDY

Recommendation 5: Amend **Standard 12** to **mandate Capnography for ALL sedation involving Midazolam or Triazolam**, regardless of the intended depth or route of administration.

DEFICIENCY 4: THE INAPPROPRIATE INCLUSION OF METHOXYFLURANE (PENTHROX)

The Issue: The Draft Standard (Standard 10 & Appendix A) introduces Methoxyflurane (Penthrox) as an accepted agent for Minimal Sedation. **The NZSSD opposes the inclusion of Methoxyflurane in a Dental Sedation Practice Standard.**

A. PHARMACOLOGY AND CLINICAL PERFORMANCE

Methoxyflurane acts as an inhaled analgesic at sub-anaesthetic concentrations; it is not licensed or characterised as a sedative agent.

- **Onset & Duration:** While it provides rapid analgesia (within minutes), it is intended solely for short procedures. Each 3 mL vial is a single-use unit; the maximum daily dose is strictly limited to 6 mL. Consecutive-day or repeated use is strongly discouraged due to cumulative toxicity risks.
- **Clinical Efficacy:** Evidence supports its use for analgesia in trauma and acute procedural pain only. It does not provide **anxiolysis, amnesia, or titratability**, which are the fundamental requirements for procedural dental sedation.
- **Alignment Failure:** These properties are fundamentally misaligned with dental sedation objectives, which require predictable cooperative behaviour and recovery.

B. SAFETY PROFILE & CONTRAINDICATIONS

- **Organ Toxicity:** Fluoride-related nephrotoxicity and hepatotoxicity are significant risks, which led to the withdrawal of Methoxyflurane as a general anaesthetic agent in the 1970s.
- **Datasheet Warnings:** Medsafe and MHRA data sheets specify explicit nephrotoxicity warnings and list halogenated-agent liver injury as a contraindication. This makes it unsuitable for the standard dental patient pool, particularly for multi-visit treatment plans.

C. OCCUPATIONAL SAFETY & PRACTICAL LIMITATIONS

- **Scavenging Systems:** Unlike Nitrous Oxide, **no dental-clinic scavenging systems exist** for Methoxyflurane vapour. Continuous inhalation in an operatory environment exposes the clinical team to halogenated ether risks, violating basic occupational health principles.
- **Procedural Interference:** Methoxyflurane is intended for patient-held, self-administered inhalation. The requirement for continuous inhalation via a whistle-style inhaler interferes with suction, mouth instrumentation, and the maintenance of a dry field. Furthermore, the delivery method significantly hinders clinician-patient communication.

D. PROFESSIONAL AND REGULATORY CONTEXT

- **ANZCA PG09(G):** Defines procedural sedation competencies and monitoring standards; Methoxyflurane is not identified as a recognised option.
- **Off-Label Usage:** Its application as a dental sedative is off-label and inconsistent with the safety and monitoring requirements (such as Capnography) established for other inhalational agents in both DCNZ and ANZCA frameworks.

E. REQUIRED REMEDY

Recommendation 6: Remove all references to Methoxyflurane from the Standard. It is an off-label emergency analgesic, not a procedural sedative, and poses insurmountable occupational health and practical clinical risks in the dental setting.

References for Deficiency 4:

1. Medsafe New Zealand. *Penthrox (methoxyflurane) Data Sheet*. Auckland: Medical Developments International Ltd. Updated 2023.
2. ANZCA (Australian and New Zealand College of Anaesthetists). *PS09(G) – Guideline on Procedural Sedation (2023)*.
3. Dental Council of New Zealand. *Sedation Practice Standard (2022)*.
4. UK Medicines and Healthcare products Regulatory Agency (MHRA). *Penthrox 3 mL Inhalation Vapour – Summary of Product Characteristics*.
5. Porter KM, et al. "Methoxyflurane for acute pain in the emergency setting: a systematic review." *Emergency Medicine Journal* 2018; 35(9): 557–563.
6. Qizilbash N, et al. "Real-world safety of low-dose methoxyflurane: post-marketing analysis." *Therapeutic Advances in Drug Safety* 2023.
7. Occupational Safety and Health Administration (OSHA). "Anesthetic Gases: Guidelines for Workplace Exposures."
8. American Dental Association. "Nitrous Oxide in Dentistry: Best Practice Guidelines."

DEFICIENCY 5: EMERGENCY DRUGS & TERMINOLOGY

The Issue: **Standard 9** replaces the prescriptive list of emergency drugs with vague language ("Medicines that are easy to administer") and suggests stocking Adrenaline 1:1,000 without explicitly requiring 1:10,000 for IV use.

A. CLINICAL SAFETY IMPACT

- **The Adrenaline Hazard:** Stocking *only* Adrenaline 1:1,000 (IM strength) creates a fatal risk of accidental IV administration during a crisis. **Adrenaline 1:10,000** must be mandated for safe titration during resuscitation.
- **Terminology:** The term "Medicines" implies a prescribing framework. In a resuscitation crisis, the accepted terminology is "**Emergency Drugs**" to trigger an action-oriented mindset.

B. REQUIRED REMEDY

Recommendation 7: Re-instate a **Mandatory Minimum Emergency Drug List** to ensure legal clarity and standardised safety.

Recommendation 8: Explicitly mandate **Adrenaline 1:10,000** alongside 1:1,000.

Recommendation 9: Clarify Hypoglycaemia protocols to specify **IV Dextrose and IM Glucagon**.

PART 3: TECHNICAL & MINOR AMENDMENTS

The NZSSD identifies the following technical inaccuracies and terminological ambiguities within the Draft Standard. We offer these refinements to ensure the final document achieves maximum clinical clarity and regulatory precision.

1. Nomenclature Update: New Zealand Society for Sedation in Dentistry (NZSSD)

- **Observation:** The Draft Standard notification refers to the "New Zealand Society for Anaesthesia and Sedation in Dentistry."
- **Refinement:** The formal and current name of the representative body is the **New Zealand Society for Sedation in Dentistry (NZSSD)**. We request that all references be updated to ensure institutional and professional accuracy.

2. Academic Precision and Clarity (Standard 18, Page 26)

- **Observation:** The draft states, "*No additional sedation training mandated beyond dentist degree.*"
- **Refinement:** In a regulatory and academic context, "dentist" refers to a protected registration title rather than a specific qualification. We recommend replacing this with "**primary recognised dental degree**" or "**degree in dentistry**" (e.g., BDS). This provides a stable, internationally understood descriptor that is essential for disciplinary accreditation and incident review contexts.

3. Emergency Rescue Plan Alignment (Standard 16, Page 24)

- **Observation:** The guidance correctly prioritises airway management and the implementation of a rescue plan, including the administration of suitable reversal drugs. However, the application of this plan to oral sedation techniques is currently underspecified.
- **Refinement:** We suggest the Standard explicitly state that the requirement for a robust rescue plan—including the immediate availability of reversal agents and the clinical skill set to administer them—applies to **all** sedation techniques, including oral protocols. This ensures a consistent safety floor across the entire sedation continuum.

4. Clinical Objectives in Case Assessment (Appendix A, Page 32)

- **Observation:** Under "The Dental Procedure," the draft identifies "*Complexity and requirement for patient to remain immobile*" as a procedural risk factor.
- **Refinement:** "Immobility" is a subjective descriptor that lacks a defined clinical threshold. We suggest the Council clarify the methodology or criteria by which procedural complexity necessitates an escalation in sedation depth, ensuring practitioners have an objective framework for case selection. "**Co-operative**" may serve as a substitute.
- **Observation:** Under "The Sedation Technique," the draft states, "*Methoxyflurane requires malignant hyperthermia risk assessment.*"
- **Refinement:** As established in Deficiency 4, the NZSSD recommends the removal of Methoxyflurane from the standard. Mandating a Malignant Hyperthermia (MH) risk assessment for an agent that is unsuitable for procedural dental sedation adds unnecessary clinical complexity without improving safety outcomes.

5. Hypoglycaemia Management Protocols (Standard 9, Page 18-20)

- **Observation:** Standard 9 and the associated drug lists reference "Glucose and Glucagon" generically for emergency management.
- **Refinement:** To ensure precision during a medical emergency, the protocol should specify **Dextrose (10% or 50% IV)** for patients with vascular access and **Glucagon (IM)** as the primary rescue agent where access is unavailable.

6. Escort Requirements (Standard 14, Page 24)

- **Observation:** The guidance states that the escort is "*Usually a responsible adult.*"
- **Refinement:** The inclusion of the word "usually" introduces potential ambiguity regarding acceptable alternatives. For the purpose of patient safety and clinical governance, we recommend the removal of "usually" to state clearly that a **responsible adult** is a mandatory requirement for discharge.

7. Monitoring Equipment Terminology (Standard 9, Page 19)

- **Observation:** The equipment list references a "Pulse oximeter" as potentially distinct from a general "monitoring device."
- **Refinement:** As a pulse oximeter is a primary physiological monitor, we suggest consolidating this requirement to mandate a **multi-parameter monitor** capable of continuous display of SpO₂, Heart Rate, and NIBP. This streamlines equipment requirements into a single, cohesive safety standard.

CONCLUSION

The NZSSD supports the Dental Council's intent to modernize sedation practice. However, patient safety must remain the paramount priority and cannot be compromised for the sake of increasing clinical access.

Permitting Oral Midazolam—a potent, variable, and non-titratable agent—to be administered under "Minimal Sedation" staffing and monitoring rules (Scenario 1, without mandatory Capnography) represents a demonstrable regression in patient safety standards. Such a framework ignores the established pharmacological reality of drug variability and exposes the public to the significant risk of unmonitored deep sedation. We respectfully request that the Council adopts the recommendations outlined in this submission to align the 2026 Standard with ANZCA PG09(G), SDCEP, and international best practice.
