



The role of the dental team in delivering conscious sedation in dentistry

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This article aims to highlight the types of sedation which can be carried out in a dental context in both primary and secondary care, the scope of practice of various team members and how team work can result in good quality sedation and patient experience.

An overview of dental sedation

Conscious sedation is defined as 'a technique in which the use of a drug or drugs produces a state of depression of the central nervous system enabling treatment to be carried out, but during which verbal contact with the patient is maintained throughout the period of sedation. The drugs and techniques used to provide conscious sedation for dental treatment should carry a margin of safety wide enough to render loss of consciousness unlikely.'¹

Conscious sedation has been used in a variety of forms in dentistry but is sometimes mistaken by patients for general anaesthesia which has been prohibited in a general dental practice setting in the UK since 31 December 2001.²

Table 1 shows some examples of indications for dental conscious sedation.³

Types of dental sedation

Informed written consent must be obtained for any procedure under sedation and so when discussing options with patients or parents it is useful to have an understanding of the different types of sedation and their advantages and disadvantages (Table 2). Some groups of patients are not suitable candidates for sedation and so a thorough medical history should be taken in order to identify any potential

risk factors. Dental treatment under sedation can be carried out in primary care, community and secondary care settings. The most suitable and safest type of sedation is assessed based on the patient's age, co-operation, medical, dental and social history.

Role of the dentist

The General Dental Council (GDC) *Scope of practice* states that dentists can provide conscious sedation.⁴ Literature has shown that primary care dentists are more likely to provide inhalation sedation when they have had good experience of undergraduate and postgraduate training;⁵ however, dentists are not the only members of the dental team who can carry out dental sedation.

In advance of the treatment, the dentist should have undertaken a relevant history and examination as well as organised any special investigations. Where sedation is planned as part of the treatment, clear written and verbal instructions should be given to the patient in advance of the appointment. Written instructions are especially useful for nervous patients who may not take in all the details at the initial appointment due to their level of anxiety.

The role of the dentist can vary from being the sedationist (and another person providing the dental aspect of treatment), the dentist (and another suitably qualified person being the sedationist) or both dentist and sedationist (the dentist is responsible for the sedation and also any dental treatment being provided). During training and undergraduate or postgraduate levels, this may be supervised by a more qualified senior member of staff.

In some higher risk cases, an anaesthetist may administer sedation in a hospital setting including in an operating theatre. In this scenario the anaesthetist is the sedationist and the dentistry is carried out by a dentist.

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The sedationist/dentist should assess signs of sedation throughout treatment. The use of a soft tone when speaking can help to promote relaxation and encourage a sense of detachment from the procedure. With inhalation sedation, the patient may report tingling in the extremities and a sense of floating or warmth. Intravenous sedation often produces an amnesic effect meaning patients cannot recall the procedure afterwards which can be beneficial for those who are nervous.

After treatment the dentist should ensure the safe recovery of the patient prior to discharge and answer any questions from the patient, parent or escort. Post-operative

instructions both written and verbal should be given and this may be done by the dentist.

Role of the dental nurse

The GDC *Scope of practice* states that in addition to the standard scope of practice, a dental nurse with additional skills may assist in the treatment of patients who are under conscious sedation. Skills relevant to treatment without sedation are still applicable to treatment under sedation such as supporting and reassuring patients, infection control procedure and preparing and maintaining clinical equipment.⁴

From the start of the appointment, the dental nurse can assist with record keeping

Table 1 Some examples of indications for dental conscious sedation³

- Patient anxiety
- Limited co-operation in children
- Certain medical conditions such as epilepsy and angina
- Strong gag reflex.

and preparation of equipment. Those attending for intravenous sedation should be accompanied by an appropriate, responsible escort. The dental nurse can make enquiries on arrival to check the suitability of the escort who should remain in the clinic for the duration of the treatment and should be an adult, solely responsible for the patient (not looking after any children or adults) and agree to continue to stay with the patient for 24 hours post-operatively. If the nurse has any concerns over the escort's suitability, they should raise it with the sedationist.

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Table 2 An overview of the advantages and disadvantages of some commonly used methods of conscious sedation in dentistry

Type of Sedation	Advantages	Disadvantages
Inhalational sedation (IS) with nitrous oxide and oxygen (varied ratio)	Safe, relatively few absolute contraindications and the duration of sedation can be varied by the sedationist. The gas is delivered by a nose piece and so is well tolerated by patients with a needle phobia. The uptake and elimination are both rapid.	Requires co-operation of the patient throughout such as obeying instructions regarding nose-breathing. IS cannot be used in patients who have nasal congestion as this technique requires the patient to breathe exclusively through their nose.
Oral sedation	Easy to administer and usually well tolerated by anxious patients.	The uptake is variable due to gastric contents and can be slow. May need to be administered in advance of treatment session. Unpleasant taste may result in rejection by children.
Intra-nasal sedation	Rapid onset due to absorption through the nasal mucosa, good for needle phobic patients.	Unpleasant sensation and inadequate co-operation (especially in children or those with learning difficulties).
Intravenous sedation with midazolam	Can be titrated to patient to ensure correct level of sedation and can be reversed by administration of flumazenil. Midazolam has an amnesic affect meaning patients remember very little or nothing of the procedure.	Not suitable for needle phobic patients or those with a high BMI (due to risk to airway). The duration of sedation may be too short for certain procedures and a recovery period is needed. The patient cannot attend alone and requires an escort to accompany them.

During treatment, the dental nurse can help to continually assess the patient's level of sedation during the procedure and inform the sedationist if they feel the patient is under or over sedated so that this can be rectified where appropriate. The dental nurse must remain with the sedated patient and dentist throughout treatment and must never leave their colleague alone when the patient is under sedation. Where necessary, another team member may act as a runner or second assistant to retrieve equipment. Ideally this should be avoided by good advance preparation and organisation.

Once the treatment is complete, the dental nurse can give suitable post-operative instructions which should cover the dental treatment carried out as well as the sedation post-operative instructions. Continued reassurance and support will benefit the patient and where appropriate a dental nurse can remove a cannula once the patient is fully recovered. It's worth noting the rationale for this is that the cannula should remain *in situ* in case a reversal drug is needed as part of intravenous sedation recovery.

Role of the dental receptionist

The receptionist at the practice also plays a role in the treatment of highly anxious patients seeking treatment under sedation. This can include helping to create a friendly welcome and relaxing environment in the waiting area of the practice and helping to check that an appropriate escort has attended with the patient.



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Role of the dental therapist and hygienist

The GDC *Scope of practice* states that in addition to the standard scope of practice, a dental therapist or hygienist with additional skills may administer inhalational sedation direct or under the prescription of a dentist.⁴

Although dental hygienists and therapists cannot administer other forms of sedation, inhalation sedation can be used very effectively for nervous patients undergoing periodontal treatment or when treating anxious children. Where the therapist or hygienist is administering the inhalation sedation, they have the same requirements and responsibilities regarding pre-operative assessment, monitoring of the patient during treatment and ensuring a safe recovery. A hygienist or therapist should also be accompanied by a second appropriately trained staff member throughout sedation to ensure patient safety.

Training as a team

All team members must be adequately trained, competent and indemnified to carry out treatment under sedation and have appropriate, up-to-date medical emergency training and equipment available. A log book should be securely kept detailing every sedation carried out in a department or practice for audit and patient safety reasons.

Due to the overlap of skills of each team member such as cannulation, record keeping and patient monitoring, team members can support each other and help develop each other's skills over time. This ultimately helps to improve the experience of patients and promotes good team working and clinical skills.

Feeling inspired?

You can find out further information about conscious sedation and how to enhance your skills from the following websites:

SAAD: <https://www.saad.org.uk>

Royal College of Anaesthetists: <https://www.rcoa.ac.uk/document-store/safe-sedation-practice-healthcare-procedures-standards-and-guidance>.

1. Royal College of Anaesthetists. Safe Sedation Practice for Healthcare Procedures: Standards and Guidance.

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