

IN BRIEF

- New guidance on dental sedation from the Faculty of Dental Surgery, RCS Eng and the Royal College of Anaesthetists (www.rcseng.ac.uk/fds).
- Defines 'standard' and 'alternative' conscious sedation techniques for adults and children.
- Makes general and specific recommendations including: clinical environment and patient selection; qualifications and training; experience and CPD.
- Includes practice inspection checklist and person specification for practice assessor.

Conscious sedation for dentistry: an update

D. C. Craig¹ and J. A. W. Wildsmith²

Despite its excellent safety record there remains disquiet about the provision of conscious sedation for dental care. This applies particularly to the use of 'alternative' sedation techniques which extend beyond the 'standard' techniques (intravenous midazolam for adults and nitrous oxide/oxygen) described in *Conscious sedation in the provision of dental care* (2003).⁴ New guidance from the Faculty of Dental Surgery of the Royal College of Surgeons of England and the Royal College of Anaesthetists develops the earlier guidance to encompass the use of alternative sedation drugs and techniques. It has been prepared for dental and medical practitioners (including anaesthetists) and their teams and defines the minimum standard for safe and effective patient care whatever the clinical setting.

THE BACKGROUND

The last decade has seen major changes in the management of pain and anxiety in dentistry. Ten years ago general anaesthesia was commonplace in spite of long-standing concerns (and many guidance reports) focusing on both clinical need and standards of practice. The last such report from a professional source was produced in 1999 after The Royal College of Anaesthetists brought together a group with representatives from all the relevant organisations.¹ Many detailed recommendations were made, but their essence was that the standards of care in general dental practice (GDP) should be those which had long pertained in hospital. Nevertheless, major adverse

events, virtually all involving avoidable factors, continued to be reported by an increasingly strident media. Fifty years before, an occasional death might not have caused headlines nationwide, but this was not the case at the end of the 20th century. The result was a review by the Department of Health (DH) and the publication of *A conscious decision*² which, in effect, banned general anaesthesia from its very birthplace, dental practice.

The report also promoted the wider use of conscious sedation in the management of dental phobia, although it was recognised that its standards also needed to be high to ensure patient safety. This, and other matters related to the use of sedation in *medical* practice, prompted the Academy of Medical Royal Colleges and their Faculties to commission a report (*Safe sedation practice*) from The Royal College of Anaesthetists.³ In terms of clinical care this advocated nothing which had not been said before, but it did introduce new recommendations regarding the framework within which sedation is used by non-anaesthetists for diagnostic and therapeutic procedures. Most of these requirements relate to hospital

practice so the reader is referred to the report for details, but one aspect common to all specialties is that the relevant organisations (ie colleges, faculties and societies) should define appropriate techniques for their areas of practice *and* the training requirements needed for them.

In dentistry this led the DH's Standing Dental Advisory Committee (SDAC) to instruct an Expert Working Group to produce a report, published in 2003, setting out these requirements for the 'standard' techniques of conscious sedation for dentistry: intravenous (IV) benzodiazepines (normally midazolam) for adults, and inhalation of nitrous oxide/oxygen mixtures for adults and children, both methods involving titration of dose to a recognised end-point.⁴ Some believe that these are all that is required in the GDP setting, but there are three issues (all relating to developments in practice) which have emerged and support the need for further advice being made available.

It is argued that:

1. Intranasal midazolam is a useful method which could be considered 'standard' even though titration of dose is not possible

¹Head of Sedation and Special Care Dentistry, King's College London Dental Institute, Floor 26, Guy's Tower, Guy's Hospital, London, SE1 9RT; ²Professor Emeritus, Department of Anaesthesia, Pathology and Neuroscience Division, University of Dundee, Ninewells Hospital and Medical School, Dundee, DD1 9SY; *Correspondence to: Dr David C. Craig Email: david.craig@kcl.ac.uk

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2. Some patients require more than the 'standard' techniques, but can be managed safely away from the hospital setting
3. More complex techniques (involving polypharmacy and/or drugs normally used in general anaesthesia) have been developed in response to point 2 and some guidance framework is better than none.

Each of these points, particularly the third, is controversial, so their consideration, let alone acceptance, must be undertaken with great caution. Initially, the SDAC established a second Expert Working Group to consider such matters, but changes in the commissioning of dental sedation by the DH⁵ meant that no report was published. The work passed to the Standing Committee on Sedation for Dentistry, a group led by The Royal College of Anaesthetists and the Faculty of Dental Surgery (RCSEng). A report has been produced and its recommendations are summarised below.⁶

STANDARDS FOR CONSCIOUS SEDATION IN DENTISTRY: ALTERNATIVE TECHNIQUES

The new report extends, but does not replace, existing guidance and states quite clearly that the definition of conscious sedation is retained and supported:

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.

The report recognises that there is ongoing concern about safety and quality standards in the provision of dental sedation⁷ and that there are continuing difficulties in patients gaining access to appropriate services for pain and anxiety control. Thus the argument that some of these problems may be overcome by the careful implementation of other techniques of sedation is accepted, but with emphasis that the issue is not just about the drug regimen employed (often the only focus of attention), but the whole package of care delivered to the patient. The report defines exactly what techniques are included within the

terms 'standard' and 'alternative', and makes both general and specific recommendations to ensure patient safety with the latter.

Standard techniques

- IV sedation using midazolam alone
- Inhalational sedation using nitrous oxide/oxygen
- Oral/intranasal benzodiazepine, but only within a strictly defined protocol which requires specific training and competence in IV sedation, especially venous access.

Alternative techniques

- Any form of conscious sedation, other than the inhalation of nitrous oxide/oxygen, in patients under the age of 12 years
- The use of a benzodiazepine with any other agent(s) with sedative effects (eg opioids, ketamine, etc)
- Any technique involving the use of propofol
- Inhalational sedation with any drug(s) other than nitrous oxide/oxygen
- Techniques which combine two or more routes of administration. This does not preclude the inhalation of nitrous oxide/oxygen to secure venous access for IV sedation *as long as* the nitrous oxide is discontinued before the IV drug is injected.

General recommendations

- Assure compliance with guidance
- Introduce a robust system for assessment of the quality and safety standards of all NHS and independent clinical teams matched to the type of service provided
- Develop a network of integrated referral centres (dental anxiety management services) providing an extended range of techniques improving service to patients while achieving revenue savings
- Establish such centres on the basis of a local needs assessment
- Develop and continuously update guidance on the quality standards required of such centres
- Take advantage of the opportunities presented by the new centres to link teaching, training and research to service provision.

Specific recommendations

Space here precludes a full account

of the specific requirements, but a summary can be given under the three broad headings in the document.

1. Environment and patient selection.

As well as meeting the requirements of dental practice, each component of the premises (waiting room, surgery, recovery area) must be appropriate to the sedation technique(s) used. The staff and equipment available must meet the needs of both the technique (including monitoring) and its possible complications, and clear limits are placed on what the operator/sedationist can use. Patient selection should involve dental, psychological, medical and social assessment, be undertaken in advance of actual treatment and include a valid consent process

2. Qualifications and training.

It is made clear that the provision of dental sedation requires specific training and supervised experience as practitioners progress to the use of more complex techniques. There is, as yet, no mandatory postgraduate qualification, but a range of relevant qualifications (eg at Diploma or MSc level) is considered highly desirable

3. Experience and CPD.

Even before starting to train in the use of an alternative technique, practitioners must have documented experience of the relevant standard technique(s) (a minimum of 100 cases over two years) and four years postgraduate experience.

Appendices to the report provide documentation for checking that the requirements have been met in individual practices.

KEY POINTS: FOR ANAESTHETISTS AND DENTISTS

From the perspective of The Royal College of Anaesthetists the key point in the report is that it is quite explicit that it applies to both medical and dental graduates. Dental sedation should only be delivered by those who are trained, quite specifically, in its use.

Conscious sedation for dentistry is very different from the sedation which anaesthetists often deliver in the operating theatre or intensive care unit. There, all the facilities for the provision of general anaesthesia are available, so 'sedation' to the point where the patient

becomes unresponsive is acceptable, often desirable.

In the dental practice setting the situation is very different, and the component of the definition of conscious sedation which refers to a '*margin of safety wide enough to render loss of consciousness unlikely*' must be kept constantly in mind.

Conscious sedation is a technique for dealing with dental phobia; it is not an alternative to effective local anaesthesia or good behavioural management; neither is it an excuse for something more like total IV anaesthesia given in the isolated setting of a dental surgery with the aim of producing rapid patient throughput.

The standard techniques of conscious sedation are approved and have excellent

safety records. Everything else, including intranasal midazolam, is an 'off label' indication for the drugs, and the implications of this must be recognised.

The safety of any technique is questionable when published series describe patient numbers measured in tens rather than hundreds, or report SpO₂ levels below 90%.

FINALLY...

A small number of practitioners ignored professional advice about standards of general anaesthesia in dental practice, with the result that it was banned. If even one aspect of this latest professional advice on conscious dental sedation is ignored, the result could be the same.

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