



Management of dental patients with conscious sedation

MMPr026

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Document Management

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DEFINITION

Conscious sedation is “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”

IACSD - 2015¹

¹ Standards for Conscious Sedation in the Provision of Dental Care 2015. The dental faculties of the royal colleges of surgeons and the Royal College of Anaesthetists

1.0 AIM

- 1.1 To provide a framework enabling the provision of a safe, efficient and effective service in a compassionate and supportive environment. Without access to such a service many patients with special needs would suffer poor oral health and possibly require dental care under general anaesthetic accepting all the inherent health risks that this poses.
- 1.2 The processes acknowledge the 'Never Event List 2018'² regarding intravenous Midazolam sedation, confirming that the intravenous presentation is 1mg/ml. It is always titrated to the patients' needs (including relevant concurrent medical and medication history) and that Flumazenil is not routinely used; the use of flumazenil is monitored and audited.
- 1.3 Patients, parents and carers will be provided with any information they require and treated with dignity at all times.

2.0 PATIENT GROUPS

- 2.1 Patients regarded by the referring practitioner as being unable to receive dental care by conventional means.
- 2.2 Age
- 2.2.1 For inhalation sedation usually from school age onwards, but dependent on maturity and compliance.
- 2.2.2 For midazolam sedation 12 years and above
- 2.3 Patients regarded as ASA III (appendix 1) may require partnership working with colleagues in the service and our Consultant Anaesthetist partners in the district general hospital.
- 2.4 Patients who are regarded as ASA IV (appendix 1) will require their care to be provided in partnership with a Consultant Anaesthetist; partners at KGH and NGH, within those settings



Never_Events_list_2

² Never Event List 2018 018_FINAL_v5 (1).pc Accessed October 2018

2.5 Patients who have a Body Mass Index of 35 or greater may not be provided care supported by intravenous sedation. If the BMI is greater than 35, consideration will be given to the ability to maintain an airway during treatment and care may not be provided if the operator has concerns regarding this.

3.0 TREATMENT PROVIDED

3.1 A broad range of simple treatments can be provided, but is ultimately dependent on the co-operation of the patient and their ability to maintain their oral health prior to and after the delivery of care.

3.2 Referring practitioners should not be prescriptive about the treatment that is needed, but should outline the disease present. The operator who provides the care will tailor the treatment to the patient.

3.3 Patients referred will be informed at the assessment that advanced restorative techniques and provision of periodontal treatments alone will not usually be included within their care plan.

4.0 REFERRALS

4.1 Referrals will be accepted via the referral management service (RMS) www.dental-referrals.org

4.2 Referring practitioners will be responsible for ensuring the appropriateness of the referral in accordance with General Dental Council guidance³ and IACSD guidance¹

4.3 Referring practitioners should advise patients that pay for care that they will be charged for their sedation; usual NHS charges for treatment should be paid to the referring GDP prior to referral and indicated on the referral form within RMS this will be confirmed at assessment

4.4 All staff involved in the care of patients using conscious sedation techniques should have received appropriate supervised theoretical, practical and clinical training for each conscious sedation technique employed and immediate life support before undertaking independent practice¹. This will be updated regularly and is subject to peer review, and review by NHS England of staff log diaries

³ General Dental Council May 2013 *Standards for the dental team Available October 2018 at URL .*
<https://www.gdc-uk.org/api/files/NEW%20Standards%20for%20the%20Dental%20Team.pdf>

5.0 PRE-TREATMENT ASSESSMENT

- 5.1 All patients will be required to attend an assessment prior to treatment. A letter indicating this requirement will be forwarded to the patients. Patients who are unable to allow the recording of some base-line physiological measurements (e.g. blood pressure) may have their treatment delayed until the operator has liaised with the patient's general medical practitioner.
- 5.2 Patients under 18 years of age are required to attend with a parent or legal guardian
- 5.3 The attending operator, in accordance with their professional guidance, will perform a dental and medical assessment¹.
- 5.4 During this visit the appropriate consent form (as per national guidance⁴) will be signed and pre- and post-operative instructions will be given verbally and in a written format It is regarded as best practice to
- 5.4.1 Describe the treatment that might be provided at the next visit
 - 5.4.2 Confirm and record advice regarding the use of any unlicensed products⁵

Patients, parents and carers should be given the opportunity to discuss any treatment options they would not be happy about and this noted.

The conclusions of any discussions are recorded within the patients' clinical notes

6.0 MIDAZOLAM TREATMENT

- 6.1 The patients will be able to refer to the information leaflet provided at the assessment visit, which will inform them of the things required of them and any other appropriate information.
- 6.2 Prior to intravenous treatment commencing the operator must ensure that any companion required to accompany the patient home or away from the surgery is physically present and remains in the clinic.

⁴ Department of Health. Reference guide to consent for examination or treatment. Gateway ref: 11911. July 2009. 2nd Edition. Found October 2018 at URL <https://www.gov.uk/government/publications/reference-guide-to-consent-for-examination-or-treatment-second-edition>

⁵ Trust Policy MMP006 available October 2018 at URL http://thestaffroom.nhft.nhs.uk/documents?media_item=2388&media_type=10#file-viewer

6.3 Midazolam will be prescribed by a dentist who can demonstrate competence in line with IACSD guidelines¹

6.3 This visit will proceed within the parameters of current professional guidance¹. No treatment can be offered if the following requirements of professional guidance cannot be complied with:

- Availability of Flumazenil ; to be prescribed by a dentist who can demonstrate competence in line with IACSD guidelines¹
Availability of a pulse oximetry and non-invasive blood pressure monitoring
- Availability of appropriately trained staff (all modes of sedation)

6.4 The routine use of Flumazenil is not acceptable; the use of a reversal agent should be reserved for urgent situations (clinical incident) and the management of patient comfort when patient special needs compromise care (planned care). If Flumazenil is used staff must be aware that the half-life of this reversal agent is shorter than that of Midazolam and that the monitoring period, post operatively should, where not compromised by behaviour, not be diminished.

Half-life Flumazenil is 40-80 minutes

Half-life Midazolam is 2-3 hours

6.5 Discussions regarding fasting have taken account of IACSD guidance¹

6.6 The use of transmucosal sedation (buccal, intranasal) may result in one of 2 scenarios:

- The patient is completely compliant for intravenous access to enable further sedation or manage and provide the desirable portal for reversal should this be required
- The patient refuses, due to behavioural issues, to allow intravenous access. In this situation the patient is safe. In this situation any future sedation treatments must note that intravenous access may not be possible and as such this is a risk that should be discussed with all parties.

7.0 INHALATION SEDATION TREATMENT

7.1 The patients will be able to refer to the information leaflet provided at the assessment visit, which will inform them of the things required of them and any other appropriate information.

7.2 Prior to treatment commencing the operator must clarify if the patient is accompanied/unaccompanied and record this.

7.3 Prescribed by GDC registrants who can demonstrate competence in line with IACSD guidelines¹

7.4 This visit will proceed within the parameters of current professional guidance.

8.0 DENTAL SURGERY

8.1 The operator will carry out any final checks in accordance with professional guidance and will make the final decision as to whether the procedure can continue as planned.

8.2 Drugs will be administered in accordance with the local Standard Operating Procedures and professional guidance (Appendix 3)

8.3 Patients will be monitored during the treatment and post-treatment periods in accordance with professional guidance.

8.4 Following treatment the patient will spend some time recovering, either in the surgery or in an appropriate other area, prior to being discharged.

9.0 DISCHARGE

9.1 The patient will continue to be cared for by an appropriately trained and experienced operator/nurse until they are declared fit for discharge by the operator.

9.2 The patient will be discharged into the care of an appropriate adult if midazolam sedation has been used. If the patient has received inhalation sedation the discharge arrangements will be left to the discretion of the operator.

10.0 RECORD KEEPING

10.1 Full, contemporaneous records will be made within the R4 system according to GDC guidance³.

10.2 All drugs used or discarded will be recorded in accordance with NHFT guidance and complying with 'Controlled Drug' requirements; whilst Midazolam is not a drug that requires this elevated level of compliance as a service we have elected to manage in this manner (appendix 3).

10.3 All post-treatment communications to referring practitioners and general medical practitioners should be completed within 1 week of the treatment date. The letters will include the dental treatment provided

and any notes that may prove useful in the future dental or medical management of the patient.

11.0 TRAINING REQUIREMENTS ASSOCIATED WITH THIS PROCEDURE

11.1 Mandatory Training

Training required to fulfil this procedure will be provided in accordance with the Trust's Training Needs Analysis. Management of training will be in accordance with the Trust's Statutory and Mandatory Training Policy'

11.2 Specific Training not covered by Mandatory Training

Ad hoc training sessions based on an individual's training needs as defined within their annual appraisal or job description which must align with the IACSD guidelines¹.

12.0 HOW THIS PROCEDURE WILL BE MONITORED FOR COMPLIANCE AND EFFECTIVENESS

Aspect of compliance or effectiveness being monitored	Method of monitoring	Individual responsible for the monitoring	Monitoring frequency	Group or committee who receive the findings or report	Group or committee or individual responsible for completing any actions
Duties	To be addressed by the monitoring activities below.				
Flumazenil usage	Retrospective audit	SDO with responsibility for audit	Annually	Service senior clinician and management meeting and Directorate governance forum	Clinical Director
Clinical/professional practice	Peer review	Clinical Director	Annually unless incidents indicate otherwise		

Where a lack of compliance is found, the identified group, committee or individual will identify required actions, allocate responsible leads, target completion dates and ensure an assurance report is represented showing how any gaps have been addressed.

APPENDIX 1

ASA PS Classification	Definition	Examples, including, but not limited to:
ASA I	A normal healthy patient.	Healthy, non-smoking, no or minimal alcohol use
ASA II	A patient with mild systemic disease	Mild diseases only without substantive functional limitations. Examples include (but not limited to): current smoker, social alcohol drinker, pregnancy, obesity (30 < BMI < 40), well-controlled DM/HTN, mild lung disease
ASA III	A patient with severe systemic disease	Substantive functional limitations. One or more moderate to severe diseases. Examples include (but not limited to): poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, ESRD undergoing regularly scheduled dialysis, premature infant PCA < 60 weeks, history (>3 months) of MI, CVA, TIA, or CAD/stents.
ASA IV	A patient with severe systemic disease that is a constant threat to life	Examples include (but not limited to): recent (< 3 months) MI, CVA, TIA, or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARD or ESRD not undergoing regularly scheduled dialysis
ASA V	A moribund patient who is not expected to survive without the operation	Examples include (but not limited to): ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction
ASA VI	A declared brain-dead patient whose organs are being removed for donor purposes	

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⁶ Available at URL <https://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system> October 2018

APPENDIX 2

BEFORE TREATMENT WITH MIDAZOLAM OR TEMAZEPAM SEDATIVES

Please do

- Bring a responsible adult with you to escort you home. They must remain at the clinic during your care
- Take routine medicines at the usual times
- Wear flat shoes

Please do not

- Eat food for four hours prior to your treatment unless otherwise advised
- Have any drinks two hours before your appointment unless otherwise advised
- Bring dependent children with you
- Wear tight collars or sleeves
- Drink any alcohol for at least 12 hours prior to your appointment
- Wear earrings or tongue/lip piercings
- Wear nail polish or acrylic nails
- Wear a Smartwatch
- Take any herbal remedies to help with anxiety

ALTERNATE FASTING ARRANGEMENTS (to be written here and signed for by operator)

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Contact details

If you are unable to keep your appointment for sedation, please let us know as soon as possible so your appointment can be allocated to another patient. If you wish to speak to a member of staff regarding any aspect of your treatment you may call the clinic that you are attending.

Clinical telephone number:

AFTER TREATMENT WITH MIDAZOLAM OR TEMAZEPAM SEDATIVES

Please do

- Travel home with your escort by car if possible
- Ensure you have a carer at home for the remainder of the day
- Stay resting quietly at home

Please do not

- Return to work for at least 24 hours
- Drive a motor vehicle or operate any machinery for at least 24 hours
- Sign any legal documents or make any important decisions for at least 24 hours
- Drink alcohol for at least 24 hours

Contact details

If you need advice after your sedation please ring us on the number below:

Clinic telephone number:

BEFORE TREATMENT WITH INHALATION SEDATION

Please do

- Wear flat shoes
- Have a light meal about two hours before treatment
- Take any routine medicines at the usual times
- Tie back long hair

Please do not

- Bring dependent children with you
- Wear tight collars or sleeves
- Drink any alcohol for at least 12 hours prior to your appointment
- Wear earrings
- Wear nail polish

Contact details

If you are unable to keep your appointment for sedation, please let us know as soon as possible so your appointment can be allocated to another patient. If you wish to speak to a member of staff regarding any aspect of your treatment you may call the clinic that you are attending.

Clinic telephone number:

AFTER TREATMENT WITH INHALATION SEDATION

Whilst the effects of inhalation sedation are short lasting you may wish to take it easy for the rest of the day.

Contact details

If you need advice after your sedation please ring us on the number below.

Clinic telephone number:

APPENDIX 3

Objective	How to administer Midazolam 5mg/5ml intravenously
Areas of work covered	Dental Sedation
Responsibility	It is the responsibility of the Dentist to draw up and administer this drug
Process Stages	<ul style="list-style-type: none"> • Wear protective gloves and protective eyewear • Check batch number and expiry date of the drug • Open the ampoule of midazolam; ampoule openers are provided • Whilst supporting the ampoule, insert a 5ml syringe with needle attached and draw up whole ampoule of 5mg/5ml • Label syringe 'Midazolam 1mg/ml • Remove the needle from the syringe and discard. Administer via port of an in dwelling cannula. Prior to administration of the drug, it may be necessary to flush 0.9% w/v sodium chloride for injections to confirm patency of the cannula; this will be recorded • Administer drug in increments; approximately 2mg of Midazolam should be given over initial 60 seconds, checking that there is no leakage at the IV site • Wait for a further two minutes whilst monitoring the patient • Further incremental doses of 1mg every 30 seconds can be given, whilst observing the patient's state • Record drug and dosage given in the 'Controlled drugs record book' and patient record

	<ul style="list-style-type: none"> • All patients transferred to a recovery setting will have the cannula flushed with 0.9% w/v sodium chloride for injections; this will be recorded • Cannula removal will be recorded
Disposal of out of date or unused open ampoule	A 'Destruction Kit' that denatures the drug must be used. Final disposal must be monitored by the Trust appointed lead within the service or appointed senior pharmacist
Authors	Deborah Manger/Sarah Keiper

Objective	How to administer Midazolam HCl 10mg/ml buccally
Areas of work covered	Dental sedation
Responsibility	It is the responsibility of the Dentist to draw up and administer this drug
Process stages	<ul style="list-style-type: none"> • Wear protective gloves and protective eyewear • Check the batch number and expiry date of the drug • Remove cap from dispensing oral syringe • Label the syringe 'Midazolam 10mg/ml' • Ask the patient to be seated in the dental chair and ask them to rest their head back. Support the head and chin • Place the oral syringe device in patient's buccal sulcus and dispense the solution. • Instruct the patient not to swallow for at least 1 minute as swallowing will diminish the effect • Record the drug and dosage given in the 'Controlled drugs record book' and patient record
Disposal of out of date or unused open ampoule	A 'Destruction Kit' that denatures the drug must be used. Final disposal must be monitored by the Trust appointed lead within the service or appointed senior pharmacist
Authors	Deborah Manger/Sarah Keiper

Objective	How to administer Midazolam HCl 40mg/ml and Lignocaine HCl 20mg/ml intranasally
Areas of work covered	Dental sedation
Responsibility	It is the responsibility of the Dentist to draw up and administer this drug
Process stages	<ul style="list-style-type: none"> • Wear protective gloves and protective eyewear • Check the batch number and expiry date of the drug • Open the ampoule; ampoule openers are provided • Whilst supporting the ampoule, insert a 1ml syringe with needle attached and draw up the whole amount of 0.5 ml • Label the syringe 'Midazolam 40mg/ml, Lignocaine 20mg/ml' • Remove the needle from the syringe and discard • Ask the patient to be seated in the dental chair and ask them to rest their head back. Support the head and chin • Place the mucosal atomisation device on the end of the syringe and place this into the patient's nostril • Instruct the patient to sniff as you push the plunger of the syringe • Record the drug and dosage given in the 'Controlled drugs record book' and patient record • It is usual to offer a dose of 10mg at the first treatment appointment
Disposal of out of date or unused open ampoule	A 'Destruction Kit' that denatures the drug must be used. Final disposal must be monitored by the Trust

	appointed lead within the service or appointed senior pharmacist
Authors	Deborah Manger/Sarah Keiper

Objective	How to administer Flumazenil 500micrograms/5ml intravenously
Areas of work covered	Dental sedation
Responsibility	It is the responsibility of the Dentist to draw up and administer this drug
Process stages	<ul style="list-style-type: none"> • Wear protective gloves and protective eyewear • Check the batch number and expiry date of the drug • Open the ampoule ; ampoule openers are provided • Whilst supporting the ampoule, insert a 5ml syringe with needle attached and draw up the whole amount of 5.0 ml • Label the syringe 'Flumazenil 500micrograms in 5ml • Remove the needle from the syringe and discard • Administer drug in increments; 200 micrograms over 15 seconds followed by 100 micrograms every 60 seconds, whilst monitoring the patient • A maximum of 1000 micrograms can be delivered. • All patients transferred to a recovery setting will have the cannula flushed with 0.9%w/v sodium chloride for injections; this will be recorded • Cannula removal will be recorded
Disposal of out of date or unused open ampoule	Place in sharps box labelled for the use of medicines
Authors	Deborah Manger/Sarah Keiper