

THE NEWCASTLE HOSPITALS NHS FOUNDATION TRUST

GUIDELINES FOR THE PRACTICE OF INTRAVENOUS SEDATION IN ADULTS

The Trust has a responsibility to ensure that patients receiving treatment under sedation are exposed to minimum risk and that sedation is practiced to the highest standards. Based on national guidelines, the following criteria for the practice of intravenous sedation are recommended. These should be implemented in all sites of the Trust where intravenous sedation is practiced. The use of intravenous sedation in children is a specialised field and should only be provided at sites in the Trust which have consultant anaesthetist or consultant sedationist* input and support.

1. 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 diagnostic or therapeutic procedures to be carried out, but during which verbal contact with the patient is maintained throughout the period of sedation.
2. The drugs and techniques used to provide sedation should carry a margin of safety wide enough to render the loss of consciousness unlikely.
3. Any technique of sedation other than as defined above shall be regarded as coming within the remit of general anaesthesia, with its consequent risks and liabilities.
4. Sedation should only be undertaken by personnel who are appropriately trained and experienced in sedation and resuscitation techniques and in the care of sedated patients, or who are working under the direct supervision of a person who is trained and experienced in sedation. It is recommended that personnel involved in sedation attend formal Trust-based or equivalent training in sedation. Basic Life Support training to at least the Trust standard is the minimum level of resuscitation training required, although sedationists in remote locations should also be trained in Immediate Life Support.
5. In the majority of procedures the sedationist will also be the operator and as such carries the ultimate responsibility for the safety of both the sedation technique and the procedure itself (including immediate recovery). Whenever sedation is employed there must be one other appropriately trained person present (trained to the same standards as Section 4 above), whose sole responsibility is to provide dedicated monitoring and care for the sedated patient. This person may be another medical/dental practitioner or a qualified nurse/dental nurse/radiographer.
6. The risks of each case must be assessed by the sedationist before the intended procedure. If there is any doubt about the fitness of the patient to receive sedation prior expert advice should be sought from a consultant anaesthetist or consultant sedationist*.
7. Fasting for sedation: the requirement for fasting of patients scheduled to undergo sedation should adhere to national specialty-specific guidance.
8. All patients undergoing intravenous sedation must have an indwelling cannula placed in a vein for reliable continuous intravenous access throughout the procedure. The cannula must be left in place until recovery is complete. Metal cannulae (butterfly needles) must not be used.
9. Intravenous sedatives should be administered slowly, in small increments, with the dose being titrated according to each individual patient's response. Verbal contact with the patient must be maintained at all times.
10. Benzodiazepines, particularly midazolam, are the standard drugs used for intravenous sedation. For some specific procedures, analgesia using short acting opioids may be required e.g. colonoscopy, ERCP, oocyte retrieval, radiological procedures. Propofol, ketamine and other sedative agents should not be used by non-anaesthetic personnel without specific training in these drugs, and especially not by clinicians acting as operator-sedationists.
11. Extreme caution must be exercised when administering opioid analgesics and benzodiazepines concurrently. Interaction between opioids and benzodiazepines can lead to serious complications, especially respiratory depression or apnoea. It is strongly recommended that any opioid analgesic be administered first and allowed to take effect before administration of the benzodiazepine. Extremely careful titration of dose is essential to avoid life-threatening complications.

12. The specific antagonists for benzodiazepines (flumazenil) and opioids (naloxone) must be available for immediate use in an emergency. These should not encourage the sedationist to adopt a lax approach to titrating the dose of agonist against response and they must not be used merely to expedite recovery. Routine reversal of sedation is potentially dangerous due to re-sedation which may occur once the patient has been discharged, and is a proxy marker for poor sedation practice.
13. Routine use of topical pharyngeal anaesthesia/throat spray with sedation is not recommended. Throat spray and sedation may predispose to pulmonary aspiration during or after endoscopic procedures and should only be used if clearly indicated e.g. fiberoptic bronchoscopy.
14. An adequate oxygen supply and equipment with compatible fittings for its delivery to the patient must be immediately to hand in any area where intravenous sedation is undertaken. It is strongly recommended that patients with identified risk factors and any patients receiving opioid analgesics and benzodiazepines concurrently should be given oxygen-enriched air (2-4 litres oxygen per minute) throughout the period of sedation. This practice may need to be continued during the recovery period. Patient safety may be enhanced by considering the use of supplemental oxygen in other patients, at the discretion of the clinician.
15. Resuscitation equipment must be available in the treatment and recovery areas. It should include basic equipment necessary to maintain the airway (oro-pharyngeal airways) and to provide positive pressure ventilation (pocket mask and/or Ambu-type bag). It must also include a source of oxygen, high volume suction and a trolley, table or dental chair which has the facility to tilt the patient head down.
16. Clinical monitoring of the patient should be undertaken continuously throughout the period of sedation and recovery. Pulse oximetry and blood pressure monitoring must be used on all sedated patients from the induction of sedation until the patient is assessed to be sufficiently recovered. ECG monitoring should be considered for higher risk cases. Monitoring must be the sole duty of a separate, appropriately trained person (see section 5). A written record of the sedation episode should be included in the patient's notes. As a minimum this should include the drugs and dosage used, the site of venous access and an adequate record of clinical monitoring, including values for arterial oxygen saturation, heart rate and blood pressure every five minutes.
17. Following sedation, patients should be observed by a suitably trained nurse/dental sedation nurse in a recovery area until fit for discharge from the procedure area. Locally specific discharge criteria (such as Aldrete scoring) should include neurological recovery and adequate cardio-respiratory function. Patients who have received reversal agents should spend at least 30 minutes in the recovery area, prior to ward discharge, to observe for signs of re-sedation.
18. Ambulatory patients should be assessed as to their suitability for discharge home. The minimum criteria for discharge should include stable vital signs, the ability to walk without support, toleration of oral fluids, ability to void urine, minimal nausea and adequate analgesia. It is unlikely that a patient will be fit for discharge from hospital less than one hour following administration of sedation.
19. Ambulatory patients must be accompanied home and supervised, for a minimum of the next 24 hours, by a responsible adult who must be given written instructions as to what to do and who to contact in the event of problems. Patients must be advised in writing not to drive or to carry out any activity involving motor skills or to sign legally-binding agreements for a minimum of 24 hours after intravenous sedation.
20. All units using intravenous sedation should undertake regular audit of clinical practice in line with national recommendations.

** For the purposes of this document the term "Consultant Sedationist" is defined as "A clinician who holds a specific contract with the Trust as Consultant or Honorary Consultant in Medical or Dental Sedation".*

References

- Guidelines for the Training, Appraisal and Assessment of Trainees in GI endoscopy. Joint Advisory Group on Gastrointestinal Endoscopy. 2001.
- Implementing and Ensuring Safe Sedation Practice for Healthcare Procedures in Adults. Academy of Medical Royal Colleges. 2001.
- Scoping Our Practice: The 2004 Report of the National Confidential Enquiry into Patient Outcome and Death. www.ncepod.org.uk 2004.

- British Society of Gastroenterologists Guidelines. Safety and Sedation During Endoscopy. http://www.bsg.org.uk/pdf_word_docs/sedation.doc
- British Thoracic Society Bronchoscopy Guidelines Committee. BTS Guidelines on Diagnostic Flexible Bronchoscopy. Thorax 2001. 56: (Suppl I); i1-i 21.
- Department of Health. Conscious Sedation in Termination of Pregnancy. 2002.
- British Association of Emergency Medicine Clinical Effectiveness Committee. Guideline for Ketamine Sedation in Emergency Departments. 2004.
- The Royal College of Radiologists Safe Sedation, Analgesia and Anaesthesia within the Radiology Department. 2003.
- Conscious Sedation in the Provision of Dental Care. Standing Dental Advisory Committee, Department of Health. 2003.

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