

Framework for consultation feedback on professional documents

PS09 Guideline on procedural sedation

Stakeholder name: NZSA

Questions	Yes or No	Comments
1. Are the intent and purpose of the document clear and unequivocal? a. If not, then how could this be better achieved?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	<p>The intent is clear.</p> <p>It has become quite a long document and in places a little confusing, due to the attempt to cover minimal-deep sedation in adults and children. In parts it reads like a paediatric guideline.</p> <p>We feel it would be better to have the definitions of sedation at the start of the document, not in the glossary.</p>
2. Does the scope of the document align with its purpose? a. If not, then why not?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<p>We think it is a terrific effort to try and get a co-badged document that many providers of sedation will sign up to. However, it must not compromise the safety of sedation practice to achieve this. Of particular concern is the 3-person model for deep sedation where the proceduralist is the sedationist.</p> <p>We note the section on procedural fasting is not yet complete, this is a big area of variation in practice that needs to be addressed.</p>
3. Does the information presented adequately address the issues?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	<p>The document provides suggestions not requirements, leaving scope for individual groups to choose their own standards.</p> <p>This document already reflects a reduced level of patient safety of prev PS09. Is there not scope for agreement on firm standards?</p>

Questions	Yes or No	Comments
		The appendix on staffing needs clarifying – see below for questions/concerns.
<p>4. Do the recommendations fulfill the intent of the document?</p> <p>a. Are there any other recommendations that should be added? For example, are there any jurisdictional requirements that have not been considered, in relation to geographical location and/or professional organisational context? Are there any cultural safety requirements that may be applicable?</p> <p>b. Are there any recommendations that should be removed?</p>	<p>Y <input type="checkbox"/></p> <p>N <input type="checkbox"/></p>	<p>This is not relevant to this document, and we would recommend removal (and it is indicated in 2 sections): <i>8.1.1. On occasions children may present for urgent or emergency procedures with injuries consistent with non-accidental injuries, the possibility of which should always be borne in mind. Where this is suspected it should be discussed with or assessed by a paediatrician.</i></p> <p>Add DDG into the glossary.</p>
<p>5. Are there any aspects that have not been considered that merit consideration?</p>	<p>Y <input checked="" type="checkbox"/></p> <p>N <input type="checkbox"/></p>	<p>ADD 7.15.12 - Consideration be given to Nitrous Oxide destruction devices given the high impact of N2O on Global Warming Potential</p>
<p>6. Do you think that the document will serve its stated purpose?</p>	<p>Y <input type="checkbox"/></p> <p>N <input checked="" type="checkbox"/></p>	<p>The section on patient preassessment is very wordy, repetitive, and long. 8.1.1. would it be simpler to have a list of red flags rather than this long section of prose?</p> <p>It is a long read and may put people off referring to it</p>

Questions	Yes or No	Comments
7. Any other comments		<p>6.1 Vague suggestions rather than requirements</p> <p>6.5 definition of paediatric (link to glossary definition).</p> <p>7.12 waveform capnography strongly recommended – not required?</p> <p>9.1.5 bullet 3: “care if LA used to topicalise the airway” – maybe it should say why?</p> <p>10.2: hypoxia can occur in the absence of supplemental O2. Is it worth saying even in the presence of supplemental O2? It makes it sound like so long as you are supplementing O2 you are ok (I know it’s pointing out that it’s not always necessary/easy to supplement O2).</p> <p>Please see below for other suggestions.</p>

Questions/concerns: The personnel scenarios are not easy to work out at first go. It needs to be clear at the top of that appendix that this is the minimum of people and the limit of patient suitability for each scenario.

APPENDIX III

Personnel for procedural sedation

Scenario 1: Minimal sedation by proceduralist (single dose of oral anxiolytic or nitrous oxide/oxygen only)



- Proceduralist/sedationist with requisite competencies for minimal sedation
- Assistant – is this an assisting practitioner or just an assistant?
- Suitable for adults
- For children a third person may be advisable

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Commented [SH1]: Would methoxyflurane pen count in this instance (that’s how it is used by ambulance crew)

Commented [SH2]: Called an assistant in the text, but image is of an assisting practitioner

- ASA 1-2 patients

Scenario 2: Minimal sedation by sedationist



- Proceduralist
- Sedationist with requisite competencies for minimal sedation
- Assistant to both – Should this image be black, not blue
- ASA 1-2 – for minimal sedation in this set up does it need to be confined to ASA 1-2? The majority of gastro/resp patients are ASA 3.
- Either adults or children

Commented [3]: Why do the people have stethoscopes?

Commented [SH4]: Does this mean one assistant assisting both, or each has an assistant in which case you need 2 assistants

Scenario 3: Moderate sedation



- Proceduralist/sedationist with requisite competencies and skills
- Assisting practitioner with requisite skills
- Assistant to assist both
- ASA 1-2
- Moderate sedation not recommended for children

Scenario 4: Deep sedation



- Proceduralist/sedationist with requisite competencies for deep sedation
- Assisting practitioner with requisite ALS skills
- Assistant to each
- ASA 1-2
- Healthcare facility with onsite medical emergency availability

Commented [5]: Each one gets an assistant? Or does it mean, as above that there is one assistant for both proceduralist and person giving the sedation? Otherwise I don't understand the different between scenarios 4 and 5.

Commented [SH6]: This is concerning, potentially propofol sedation. Who in this model is the airway rescue? Crash teams can take up to 5 mins to arrive, that is significant in the face of hypoxia

Scenario 5: Deep sedation



- Proceduralist/sedationist with requisite competencies for deep sedation
- Assisting practitioner with requisite ALS skills
- Assistant to each
- Suitable for children
- Suitable for ASA 1-2
- Healthcare facility with no onsite medical emergency availability

Commented [SH7]: The two assistants should be black, one for proceduralist and one for sedationist, assuming the sedationist is the one monitoring the patient.

Commented [SH8]: is it meant to say suitable for children? At first read that makes it sound desirable for children. I think it's trying to say only suitable for children if the following personnel are all present. But that's not how it comes across at a superficial read. Same for ASA 1-2 (maybe should say only ASA 1-2 ?)

Scenario 6: Deep sedation/anaesthesia by anaesthetist



- Proceduralist
- Anaesthetist
- Assistant to assist both
- ASA 1-4
- Adults and children
- All approved anaesthetic medications may be used

Commented [9]: These should be black, the brown figure is the assisting practitioner who is acting as a patient monitor if the proceduralist is the sedationist, but you have an anaesthetist present, not 2 assisting practitioners. Two make this clearer have them in the order sedationist, assistant, anaesthetist, assistant

Commented [SH10]: Says all approved meds are ok. That implies that this is not true for the other scenarios- however the document is at pains to say that no meds are excluded so long as used with the appropriate training etc.



Recommendations on wording/grammar

4.1

Risks of sedation require that sedationists are aware that transition from complete consciousness through the various levels of sedation to general anaesthesia is a continuum and not a set of discrete, well-defined stages. The margin of safety of medications used to achieve sedation varies widely between patients and loss of consciousness with its attendant risk of loss of protective [airway](#) reflexes may occur rapidly and unexpectedly.

Section 6 staffing 3rd paragraph

It is essential that sedationists and assisting practitioners remain attentive to their patients throughout the duration of sedation. The frequency of monitoring, and confirming of [the predetermined](#) acceptable vital signs, will be determined by their patient's current conscious state, duration since administration of the last dose of sedative, and pharmacokinetics properties of the drugs used.

Section 6.5

Where the proceduralist is also the sedationist, an assistant may assume the role of assisting practitioner, on condition they are trained in observation and possess basic life support skills. The primary duty of assisting practitioners is to monitor and record the level of consciousness and cardiorespiratory status and be immediately available to manage complications should the need arise. Assisting practitioners may, if trained to do so, administer sedative medications under the direct supervision of proceduralists, who should, at a minimum, have [ALS advanced life support skills](#) and training (see Appendix IV) if providing moderate to deep sedation. Propofol, thiopentone and other anaesthetic agents are not to be used in these circumstances, unless the proceduralist is able to immediately interrupt the procedure, or a practitioner with [these skills in administering those drugs](#) is immediately available. In circumstances of paediatric sedation with anaesthetic agents, a separate sedationist practitioner with age-appropriate skills and experience is essential.

7.2 Adequate lighting [to perform resuscitation. \(otherwise adequate for what?\)](#)

7.7 Medications for cardiopulmonary resuscitation and for reversal of benzodiazepines and opioids (See Appendix II), as well as a range of intravenous equipment and fluids.

7.14A written, and ideally, practised, escalation plan or clinical emergency response plan in the event of clinical deterioration.

8.1 Patient assessment:

All patients should be assessed and consulted as part of the normal management of procedural sedation. Pre-procedural assessment and application of selection criteria should be performed in all non-emergency cases. The nature of the procedure should be considered including: ~~duration of the procedure, likelihood of pain, the need for immobility and the need for different levels of alertness.~~ These factors will dictate the aims of sedation in each case. ~~This consideration should include~~

8.1.2 In addition to the above, for minimal sedation, assessment should include:

Other medical co-morbidities or psychiatric illness. Patients who have medical co-morbidities such as cardiac diseases~~heart problems~~, respiratory diseases, epilepsy, vascular disease, or diabetes; ~~or patients~~ or patients with psychiatric

8.3.2 When older adolescents are to undergo sedation, informed consent may be sought from patients who have the mental capacity to consent ("Gillick competent minors"). Mindful of variations in maturity, family arrangements and care relationships, minors providing consent should be encouraged to share decision-making with their parent/caregiver(s). Notwithstanding parental consent, it is strongly recommended all teenagers and children, ~~are~~ given developmentally applicable information for the purpose of seeking their consent~~assent~~ to the procedure. Relevant information for parents should include the purpose and likely outcome of the procedure, as well as the intended level of sedation and alternatives to sedation taking into consideration the sedating environment and capability of the healthcare facility, including staffing skill mix and availability.

8.3.3 Sedationists should ensure that processes are in place that confirm patients understand and adhere to pre-procedural preparation and fasting.

9.1.3 As most complications of sedation are cardiorespiratory, doses of sedative and analgesic medications should be kept to the minimum required for patient comfort, particularly for those patients at increased risk of sedation related complications.

9.1.4 When selecting agents, it is important, ~~when selecting agents~~, to consider their duration of action to ensure that they are commensurate with the required duration of sedation. To avoid the potential for prolonged effects of sedation at home, it is recommended that paediatric sedation is achieved with short acting agents rather than long acting ones.

9.1.5

Regardless of the route of administration, constant vigilance is required where combinations of medications are used, due to their synergistic interactions. Also, for early detection and management in cases of unanticipated sensitivities. Particular care is required when topical local anaesthetic of the larynx or pharynx is employed.

Intravenous anaesthetic agents, such as ketamine and propofol should be used only by sedationists trained and competent in their use. This includes an understanding of the nature of these medications along with their actions, pharmacology, and dose range. Unintentional general anaesthesia may occur, particularly in patients who are unwell or otherwise sensitive to their effects. An anaesthetic consultation is advisable if these concerns are present.

9.2 Monitoring

Routine monitoring of the depth of sedation and changes in depth, is essential. Purposeful response to verbal commands or tactile stimulation is an early and sensitive guide. Loss of patient response to stimulation or verbal commands heralds loss of airway reflexes, respiratory and/or cardiovascular depression are likely, and sedation should be adjusted accordingly. Monitoring of verbal response may be difficult in patients with intellectual disabilities or language difficulties, or with small children.

9.2.2 Continuous waveform capnography is recommended for sedation where verbal contact is lost or difficult to monitor. Capnography is strongly advised for moderate and deep sedation in children.

9.2.3 Regular monitoring of pulse rate, oxygen saturation and blood pressure throughout the procedure and recovery phase, using equipment suited to patient size, is essential. For those patients in whom monitoring prior to commencement of sedation may not be practical, such as small children or patients with intellectual disabilities, monitoring must commence as soon as possible, regular monitoring should continue throughout the episode of sedation and the early recovery phase of care.

11 Documentation

The clinical record should include the names of staff performing sedation, as well as documentation of the history, examination and investigation findings. A written record of the dosages of medications and the timing of their administration should be kept as a part of the record. Such entries should be made

Commented [11]: This is covered in the competencies

Commented [SH12]: This can occur in anyone

Commented [13]: in all

Commented [14]: If not possible prior, must commence as soon as is possible

Commented [15]: under the respective roles - who is the sedationist, and if this is the proceduralist, who is the patient monitor. Who in the room is ALS trained? Does this need to be recorded?

as near to the time of administration of the medications as possible. This record should also note the regular readings of monitored variables, including those during the recovery phase, and should contain other information as indicated in ANZCA professional document *PS06 Guideline on the anaesthesia record*.

13.3 Regular certification in cardiopulmonary resuscitation relevant to the clinician's practice, as well as evidence of relevant continuing professional development, are requirements for [credentialing/credentialling](#).

14.1 It is strongly recommended that sedationists undertake regular ~~an~~ effective audit of their sedation practice and comply with local jurisdictional requirements.

APPENDIX II

Lidocaine 1% topical to break laryngospasm in [children](#)

Appendix 4

The goals of paediatric sedation include:

- Guarding patient safety and wellbeing
- Minimising discomfort and pain
- Controlling anxiety and minimising psychological trauma
- Modifying behaviour and or movement to facilitate successful completion of the procedure.

Commented [16]: Does this need more explanation? Would most non anaesthetists reading this know where to put the lignocaine? Or how? Could it cause more confusion or harm than it might help by having it here? Grabbing a laryngoscope and spraying lignocaine directly on to vocal cords is an advanced skill I would not expect most sedationist to have.

Commented [17]: This is the goal of all sedation, not just paediatric, why are we just talking about paedics here?

1. Describe key safety features when conducting a risk assessment of the facility capability and proposed sedating environment.

Paediatric sedationists should be able to assess the suitability of any sedating environment, capability of any healthcare facility including assisting staff to support safe paediatric sedation for the intended level of sedation and describe the similarities and differences for the different age groups.

Sedationists intending to administer moderate or deep sedation intravenously or intramuscularly to children under 3 years of age, are advised to consult with a paediatrician, paediatric experienced critical care specialist or anaesthetist. Where intended sedation levels for young children are beyond minimal, then ANZCA PS29 provides guidance on the competencies required to rescue deeper levels of sedation which may encroach on general anaesthesia for procedures demanding movement control.

Commented [18]: Again, all about paed. This should be just as relevant for adults.

13 By the end of training, the trainee assisting practitioner will be able to:

- Apply age-appropriate techniques of communication with children to alleviate anxiety and minimise the use of sedative medications.
- Discuss the use of age-appropriate non-pharmacological techniques of procedural management or conduct in order to minimise the use of sedative medications.
- Perform age appropriate BLS, ALS and contribute to anaphylaxis management