MIDAZOLAM PREMEDICATION PROTOCOL FOR USE IN PAEDIATRICS

TARGET AUDIENCE	This document covers the use of midazolam for premedication in paediatric patients within secondary care in NHS Lanarkshire.
PATIENT GROUP	Paediatric patients who require premedication for procedures within NHS Lanarkshire

Clinical Guidelines Summary

Which patients require midazolam premedication?

- An assessment of preoperative anxiety should be documented and a clear anaesthetic plan agreed upon prior to surgery.
- Any patient who is listed for a procedure may require sedative premedication.

Midazolam must not be given to anyone with any contraindications

Consent for premedication with midazolam must be obtained and documented

Midazolam Dosing

- Premedicants can be given the night before major surgery; a further, smaller dose may be required before surgery. Alternatively, the first dose may be given on the day of the procedure.
- Miprosed 5 mg/mL oral solution is licensed preparation for premedication and the choice formulation within NHS Lanarkshire. The dose may be diluted with apple juice or blackcurrant cordial, the dosing information is below:

Medication	Dose	Route	Time of administration	Duration	Effects
Midazolam	500 micrograms/kg (max. per dose 20 mg)	Oral	15-30 minutes before procedure or anaesthesia	1-2 hours	Sedation, anxiolysis, amnesia, paradoxical reaction in some children

Monitoring

- Administration of sedative premedication must be done with the availability of monitoring and resuscitation equipment in the event of respiratory depression.
- Once the premedication has been administered the patient should remain on the ward under direct supervision.
- If the patient becomes drowsy or falls asleep oxygen saturation should be continuously monitored by pulse oximetry including during transfer to the theatre department.

Insert Clinical Guideline Title

Midazolam Premedication guideline

Background

In general, most children can be made to feel comfortable with the journey to theatre and the process of induction of anaesthesia, that they do not require premedication. There are however cohorts of children who will benefit from premedication prior to transfer to theatre for induction of anaesthesia.

Reducing anxiety in children of all ages is an important component of perioperative medicine. Induction of anaesthesia can be stressful for children and parents. This may have on going negative adverse psychological, metabolic and physiological effects including increased postoperative pain, nausea and vomiting and prolonged recovery. The use of sedative premedication in paediatric patients is intended to reduce preoperative patient anxiety and to increase cooperation with the general anaesthetic process.
The advantages of using sedative premedication must outweigh the possible disadvantages. The advantages of a pre-medicant are that it can reduce both patient and carer anxiety therefore improving the overall experience, it can provide amnesia and may reduce behavioural changes post operatively. Disadvantages include paradoxical reactions, prolonged hospital stay, potential additive effects with other medications which the patient may already be taking.

Which patients require midazolam premedication?

- An assessment of preoperative anxiety should be documented and a clear anaesthetic plan agreed upon prior to surgery.
- Any patient who is listed for a procedure may require sedative premedication. Particular groups of patients that may be at greater risk of requiring premedication are:
  - Children with special educational or behavioural needs e.g. Autism, Aspergers, Down's syndrome
  - Children having major surgery
  - Children having repeated procedures
  - Children who have had a previous bad experience of the hospital environment
  - Children with anxiety

Contraindication to midazolam premedication

- Anticipated difficult airway
- Increased aspiration risk
- Obstructive sleep apnoea
- Severe renal or hepatic impairment
- Reduced Glasgow Coma Scale
- Previous allergic or behavioural reaction to midazolam
- Raised intracranial pressure
- Acute systemic illness e.g. severe sepsis
- Reduced oxygen saturation on room air

Consent

- Where sedative premedication is to be administered to a patient, this will be discussed with the patient and the parent/carer, by the anaesthetist at the preoperative visit.
- This discussion will include, but may not be limited to, the timing of the premedication, and its potential effects both preoperatively and postoperatively.
- All patients should be included in the discussion regarding their perioperative care as much as possible given their level of comprehension.
- Consent for premedication must be obtained and documented.

Midazolam Dosing

- Premedicants can be given the night before major surgery; a further, smaller dose may be required before surgery. Alternatively, the first dose may be given on the day of the procedure.
- Midazolam is the most common premedicant for children, oral administration is preferred if possible.
- Care should be taken when prescribing in the overweight child, with consideration made to calculating dose using ideal body weight.
- Repeat premedication doses may be required, especially if the child has not taken the original dose effectively. This should be written up by the anaesthetist and administered with the appropriate monitoring as necessary.
- Miprosed 5 mg/mL oral solution is licensed preparation for premedication and the choice formulation within NHS Lanarkshire. The dose may be diluted with apple juice or blackcurrant cordial, the dosing information is below:

Medication	Dose	Route	Time of administration	Duration	Effects
Midazolam	500 micrograms/kg (max. per dose 20 mg)	Oral	15-30 minutes before procedure or anaesthesia	1-2 hours	Sedation, anxiolysis, amnesia, paradoxical reaction in some children

Monitoring

- Administration of sedative premedication must be done with the availability of monitoring and resuscitation equipment in the event of respiratory depression.
- The oral preparations may be added to a small volume of flavoured squash to help with any unpleasant taste, i.e. dilute with an equal volume of squash.
- Once the premedication has been administered the patient should remain on the ward under direct supervision.
- If the patient becomes drowsy or falls asleep oxygen saturation should be continuously monitored by pulse oximetry including during transfer to the theatre department.
- An oxygen cylinder, face mask and ambu-bag should be available on the patient's bed or trolley for transfer.
- Children who are assessed and require a premedication should be reassessed prior to induction of anaesthesia for effect.

References

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Appendices

1. Governance information for Guidance document

Lead Author(s):	Lynsay McAulay, Senior Clinical Pharmacist
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CHANGE RECORD			
Date	**Lead Author**	**Change**	**Version No.**
		e.g. Review, revise and update of policy in line with contemporary professional structures and practice	1
			2
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2.You can include additional appendices with complimentary information that doesn't fit into the main text of your guideline, but is crucial and supports its understanding.

e.g. supporting documents for implementation of guideline, patient information, specific monitoring requirements for secondary and primary care clinicians, dosing regimen/considerations according to weight and/or creatinine clearance