

WAHT-TP-054

**Sedation of children for CT and MRI**

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**Key Amendments to this Guideline**

<b>Date</b>	<b>Amendment</b>	<b>Approved by (name of committee or group approving)</b>
20/05/2018	Children over 1 month and up to 6 months of age now receive 50 mg/kg of Chloral Hydrate.	T.Dawson

**Introduction**

The purpose of this guideline is to ensure sedation is administered safely to children prior to a CT or MRI scan. Whenever it is practical and possible children should be prepared for procedures by the appropriate specialist staff (i.e. children’s nurses, play specialist, radiography staff) in order for the procedure to be carried out without sedation. The needs, abilities and physical condition of the child must be assessed in each individual case and if sedation is required this should be undertaken using the best available evidence to optimise safe and effective sedation.

**Details**

- Parental consent must be gained and documented prior to sedation being performed.
- Parents must be informed of any potential side effects due to sedation and the possibility that sedation may not be successful (see appendix 1a).
- All children should be assessed for suitability or appropriateness for sedation prior to sedation being given. Pre-existing illnesses/conditions and contraindications to sedation should be identified and documented. Sedation should not be carried out in the presence of contraindications i.e. temperature related to respiratory infection or condition, airway compromise, uncontrolled epilepsy, recent head injury, tracheal stenosis, hepatic, renal or metabolic instability (see also appendix 1b).
- The medical practitioner will assess patients and document when requesting the procedure that it is to be carried out under sedation.
- An Advanced Nurse Practitioner or nurse experienced in sedation with EPLS or PILS skills will assess the patient on the day of the procedure to be carried out and ask for medical advice if any contraindications are identified.
- Sedation for the procedure will only be administered once the child is assessed as fit to undergo sedation.
- Prior to sedation being administered, the child will be fasted as per the Trust’s paediatric fasting guideline:
  - No food may be taken for 6 hours before the procedure (infants may be given breast milk up to 4 hours before anaesthesia or sedation).

**WAHT-TP-054**

- Water or dilute squash should be consumed up until 2 hours before the procedure. Tea and coffee with a small amount of milk is also acceptable. Essential medicines should also be given at this time. Please see ‘WHAT-TP-054 Nil by Mouth and Perioperative medicines use guideline’ for more information (available on the intranet).
- For 2 hours before the procedure, no food or drinks may be consumed or chewing gum chewed. However, a small amount (30ml) of water to take tablets prescribed as a premed may be permitted.
- The respiratory and cardiovascular status of the child will be monitored and recorded from the time sedation is administered until the child is fully alert following the procedure.
- A nurse with current EPLS/PILS training will accompany the sedated child for the procedure if it's to be carried out away from the paediatric department. Basic airway management equipment will be available at all times until the child is awake.
- If a painful procedure is to be carried out while the child is sedated, in addition to a CT or MRI scan, topical anaesthetic must also be used (i.e. venepuncture or cannulation – LMX cream)

**Drug Regime**

<b>Chloral hydrate: given orally (PO) or rectally (PR) 30 minutes to 1 hour before the procedure</b>	
Age/ Weight	Sedation
< 1 month old	Comfort by feeding and wrapping the child
Over 1 month and up to 6 months	50 mg/kg
6 months - 1 year or up to 10 kg	75 mg/kg
10-15 kg or up to 3 years of age	100 mg/kg
>15 kg and/ or over 3 years of age	Sedation unlikely to be effective, to be assessed on individual basis, if unable to undertake procedure without sedation consider a general anaesthetic.

**Appendix 1a**

**SIDE EFFECTS OF DRUGS USED FOR SEDATION**

1. **Digestive system**  
**Stomach** - Gastro intestinal Irritation.
2. **Skin** - Hypersensitivity reaction including skin rashes.
3. **Respiratory system** - Respiratory depression. Airway Patency may be compromised when child is asleep.
4. **Nervous system** - Occasional ataxia, loss of co-ordination due to irregularity of muscular action.  
Headache.  
Confusion and a disinhibited state occur

## Appendix 1b

### CONTRA INDICATIONS TO PAEDIATRIC SEDATION.

(a) Minor inter-current illness:

- Urinary tract infection
- Temp > 38°C
- Diarrhoea and vomiting
- Rash

(b) Major disease states

- Airway obstruction
- Respiratory compromise
- Cardiovascular instability
- Uncontrolled epilepsy
- Severe renal or hepatic failure
- Raised Intracranial pressure
- Decreased level of consciousness

(c) Not fasted

(d) Currently on other anaesthetic opioids, anti-psychotic or anti-depressant medication.

## REFERENCES

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