

## Sedation

Procedural sedation is often required for painful procedures, such as LPs and Bone Marrows, and for lengthy procedures requiring immobilization, such as CTs, MRIs and radiotherapy. For minor procedures such as IV or IM injections a topical anesthetic may be required.

### Precautions:

- When sedation is indicated, oxygen, suction and a crash cart with pediatric sized equipment must be readily available
- Procedural sedation using IV medications should only be given with approval from the hospital anesthesiology department
- It is recommended that two nurses be in attendance for procedural sedation as well as a physician competent in pediatric resuscitation.

### Local anesthesia:

- EMLA cream (Lidocaine+Prilocaine)
- Apply with occlusive dressing to site of needle poke 1 hour prior to procedure

### Fasting prior to sedation:

- 5 hours of no solids and 2 hours of NPO
- May have clear fluids up until 2 hours prior to procedure
- if patients are to receive propofol, the patient should be NPO from midnight

### Oral sedation:

Indications: LPs and other procedures

Midazolam	0.5 mg/kg po 30 minutes prior to procedure
Lorazepam	0.05 mg/kg (maximum 4mg/dose) sublingual 30 minutes prior to procedure
Morphine	0.15-0.6 mg/kg po - may be given with midazolam or lorazepam for painful procedures

### IV Sedation:

Monitor O2 saturation with oximeter and BP and heart rate every 2-3 minutes

Midazolam	1 <sup>st</sup> dose at minute 0	0.1 mg/kg
	If patient is well sedated do not give further doses	
	2 <sup>nd</sup> dose at minute 2	0.1mg/kg
	If patient is well sedated do not give further doses.	
	3 <sup>rd</sup> dose at minute 4	0.1 mg/kg
Flumazenil	For treatment of benzodiazepine overdose – repeat doses as necessary	0.01mg/kg/dose Max dose 0.2mg Max cumulative dose 1 mg
Fentanyl	1 microgram /kg/dose IV every 2 minutes to a maximum of 4 micrograms/kg	
Naloxone	For reversal of opioid induced respiratory depression. Repeat every 2-3 minutes as necessary Children <20 kg: 0.01mg/kg/dose Children >20 kg: 0.2 mg/dose	
Ketamine	Recommended only to be given by or in the presence of a qualified anesthetist.	

### Complications of midazolam, fentanyl, and lorazepam

Respiratory depression, hypotension