**Facts**
IV midazolam titrated and given as incremental boluses is a safe method of delivery, providing the risk factors are considered prior to administration and the child is adequately monitored.

**Pharmacodynamics**
- Anxiolytic – relieves anxiety / sedative / amnesic
- No analgesic effect

<table>
<thead>
<tr>
<th>Duration of effect</th>
<th>Onset of action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect may last 30–60 minutes</td>
<td>1–5 minutes</td>
</tr>
<tr>
<td>Incremental boluses to achieve &quot;anxiolytic effect&quot; to safely execute the procedure*</td>
<td></td>
</tr>
</tbody>
</table>

* The desired effect is the relief of ‘anxiety’ rather than sedation

**Dose**

<table>
<thead>
<tr>
<th>Children &gt;6 months and under 12 months</th>
<th>Children &gt;12 months, under 50kg</th>
<th>Child’s weight over 50kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1mg/kg of midazolam dilute to 10mls of 0.9% normal saline</td>
<td>0.1mg/kg of midazolam dilute to 10mls of 0.9% normal saline</td>
<td>5mg of midazolam dilute to 10mls of 0.9% normal saline</td>
</tr>
</tbody>
</table>

**Bolus:**
- Give 1ml and repeat bolus at intervals of no less than 5 minutes to achieve or maintain anxiolysis*
- Give 1–2mls and repeat bolus at intervals of no less than 3 minutes to achieve or maintain anxiolysis*

Do not exceed total dose of 0.15mg/kg in 15mls of 0.9% normal saline
Do not exceed total dose of 0.15mg/kg in 15mls of 0.9% normal saline
Do not exceed total dose of 7.5mg in 15mls of 0.9% normal saline

* Monitor blood pressure 5 minutely, saturations and UMMS score

**Documentation**
Utilise the Record of Sedation for Procedures (MR56S) for fasting/observations/documentation requirements

**Side effects**
Rapid administration of IV midazolam increases the risk of cardiorespiratory depression.

**Adverse effects**
- Excessive sedation (UMSS score ≥ 2)
- Respiratory depression/apnoea
- Airway obstruction
- Hypotension, especially in patients with impaired cardiovascular stability
- Delirium/paradoxical agitation
- Hiccups
- Impaired coordination/balance. Patients are at risk for falls.

**Precautions**
Drug interactions, caution with drugs which cause sedation, respiratory depression or hypotension (e.g. opioids, benzodiazepines, antihistamines, antihypertensives)
- Cardiorespiratory instability e.g. altered depth and/or rate of respiration, apnoea, and low blood pressure
- Previous failure to sedate or paradoxical excitement with midazolam

**Further information:** Clinical Practice Guidelines ‘Procedural Sedation’ www.rch.org.au/comfortkids/professional.cfm?doc_id=10138

**Acknowledgements:** RCH Department of Anaesthesia and Pain Management, Comfort Kids Program, RCH. University of Michigan Sedation Score (UMSS). MIMS Pharmacy.