
	<h2 style="margin: 0;">Intranasal Fentanyl Administration Drug Protocol</h2>	
<b>Scope</b>	<ul style="list-style-type: none"> <li>• Emergency Department</li> <li>• Children's Ward</li> <li>• Medical Staff</li> <li>• Registered Nurse (RN)</li> </ul>	
<b>Action &amp; Indication</b>	<ul style="list-style-type: none"> <li>• Moderate to severe pain (pain scores &gt; 6) in patients aged 1 year of age to 15 years of age requiring opioid analgesia, e.g. long bone fractures, major lacerations, burns, abdominal pain, procedural pain (including painful procedures under nitrous), post-operative analgesia</li> <li>• Difficult or no intravenous access</li> <li>• Alternative to morphine</li> <li>• Onset is within 2-3 minutes and the duration is 30-60 minutes.</li> </ul>	
<b>Contraindications</b>	<ul style="list-style-type: none"> <li>• &lt; 1 year of age</li> <li>• Head injury, brain tumours, increased intracranial pressure</li> <li>• Altered conscious state, Glasgow Coma Scale (GCS) &lt;15 or Sedation Score &gt;2</li> <li>• Epistaxis, Nasal Trauma, bilateral occlusion of nostrils</li> <li>• Known fentanyl hypersensitivity</li> <li>• Monoamine oxidase inhibitors (MAO) inhibitor antidepressant use within the last 14 days</li> </ul>	
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Respiratory, hepatic and/or renal impairment</li> <li>• Hypothyroidism / chronic opioid use / arrhythmias</li> <li>• Hypovolaemia</li> </ul> <p><b>Precautions that may be relevant to adolescents:</b></p> <ul style="list-style-type: none"> <li>• Alcoholism</li> <li>• Pregnancy, labour or lactation (within 24 hours)</li> <li>• Abdominal pain related to significant psychological distress</li> </ul>	
<b>Drug Prescription</b>	Medication Chart MR114/Paediatric Medication Chart MR 114.2	
<b>Presentation</b>	Fentanyl 100 micrograms/2mL vial (same vial as that used for iv dosing)	
<b>Dose</b>	<p>Dosage is based upon weight <a href="#">See Appendix 1 for dosing guide</a> (double check dose with another RN or Intern, HMO or Registrar)</p> <p><b>Initial dose:</b>  <b>1.5 micrograms (mcg)/kg</b></p> <p>Draw up the dose of fentanyl according to the child's weight, plus an additional 0.1mL (for priming purposes) into a 1mL syringe.</p> <p><b>Subsequent doses:</b></p> <p>A second dose of 0.75-1.5 micrograms (mcg)/kg may be given after 10 minutes if required to provide adequate analgesia.</p> <p>After the second dose, if further analgesia is required, review and consider alternative/additional analgesia (eg IV morphine 0.1mg/kg).</p> <p>Usual maximum dose is 75-100mcg due to volume restrictions.</p>	
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• 1 mL <b>luer lock</b> syringe</li> <li>• Needle to draw up the fentanyl</li> <li>• MAD device (see below)</li> <li>• Vial of fentanyl (100mcg/2mL)</li> </ul> 	

	<p><b>Mucosal Atomization Device- MAD</b></p> <ul style="list-style-type: none"> <li>• A MAD device is a disposable single-use atomiser designed for atomising solutions across the nasal, oropharyngeal and laryngotracheal mucous membranes. It has 0.1mL dead space when attached to a 1mL syringe.</li> <li>• For the initial dose, draw up the required dose plus an extra 0.1mL of fentanyl in the syringe (for priming purposes).</li> <li>• Subsequent doses with the same MAD device do not require additional 0.1mL as the device is already primed. <b>NOTE:</b> The extra 0.1mL fentanyl remains in the MAD device and is not delivered to the patient.</li> </ul>
<p><b>Administration</b></p>	<ul style="list-style-type: none"> <li>• In the Children’s ward, I/N fentanyl <b>must</b> be administered in the treatment room with an Intern, HMO or Registrar present in the unit.</li> <li>• Prior to administration all patients receiving treatment should have the MR 101.1 sedation checklist commenced.</li> <li>• Check patient identification, weight and allergies.</li> <li>• Provide parent and child with an explanation of the procedure.</li> <li>• Obtain verbal parent/caregiver consent.</li> <li>• If the patient is cooperative ask the patient to blow their nostrils prior to administration, to ensure adequate uptake.</li> <li>• Administer via MAD device.</li> <li>• Draw up appropriate dose for weight plus 0.1ml extra to the first dose (to account for the dead space in the MAD device) and double check dose with another RN or an Intern, HMO or Registrar</li> <li>• Attach MAD to the end of the syringe</li> <li>• With the child sitting at approximately 45 degrees or with head to one side, insert the device loosely into the nostril and press the plunger quickly</li> <li>• Dose should be divided between nostrils</li> <li>• No more than 1mL volume can be administered into each nostril at any one time</li> <li>• Intranasal fentanyl should be used in conjunction with simple analgesia and non-pharmacological measures</li> <li>• The patient should be awake or easily roused to voice prior to each dose</li> </ul> <p><b>Note:</b> Do <b>NOT</b> draw up 0.1ml extra for second dose when <b>re-using</b> the delivery device (MAD)</p>
<p><b>Monitoring Requirements</b></p>	<ul style="list-style-type: none"> <li>• Assess the child’s pain score utilising a validated &amp; age appropriate pain tool (eg. Baker Wong Facial Scale) see: <a href="#">Acute Pain Assessment and Assessment Tools</a> .</li> <li>• Attach pulse oximeter and blood pressure (BP) cuff to the child.</li> <li>• Document baseline vital signs (pulse, respiratory rate and SpO<sub>2</sub>)</li> <li>• Ensure oxygen and naloxone are available at bedside.</li> <li>• Document sedation, pain scores and vital signs 5 minutely for 10 minutes post last dose, then 10 minutely until 30 minutes post last dose (GCS, BP, HR, RR, and SpO<sub>2</sub>).</li> <li>• If an ED patient still has pain after two doses of intranasal fentanyl, notify an ED Consultant or Registrar.</li> </ul>

<b>Adverse Effects</b>	The following adverse effects are uncommon: <ul style="list-style-type: none"> <li>Respiratory depression, nausea/vomiting, hypotension, bad taste, nasal itching</li> </ul>	
<b>Management of Complications</b>	<ul style="list-style-type: none"> <li>Contact a senior medical officer immediately if the following occur: <ul style="list-style-type: none"> <li>Unroutable</li> <li>Significant reduction in systolic blood pressure</li> <li>O<sub>2</sub> saturation &lt;90%</li> </ul> </li> <li>Cease administration of fentanyl</li> <li>Support airway</li> <li>Administer oxygen and assist with ventilation if required</li> <li>Perform intravenous cannulation</li> <li>Consider naloxone bolus 0.1mg/kg IM/IV - maximum of 2mg</li> <li>Consider the need for <a href="#">Make A Call "MAC" OR Medical Emergency Team (MET) Bendigo Hospital Protocol</a></li> </ul>	
<b>Documentation</b>	Age appropriate observation chart Sedation Checklist & Record MR101.1	
<b>Bendigo Health Related Documents</b>	<ul style="list-style-type: none"> <li><a href="#">Medication Checking and Administration</a></li> <li><a href="#">Informed Consent</a></li> <li><a href="#">MAD Mucosal Atomization Device for Drug Administration</a></li> <li><a href="#">Medication Administration in Paediatrics</a></li> <li><a href="#">Make A Call "MAC"</a></li> <li><a href="#">Medical Emergency Team (MET) Bendigo Hospital Protocol Code Blue Initiation, Response &amp; Documentation</a></li> <li><a href="#">Acute Pain Assessment and Assessment Tools</a></li> </ul>	
<b>References and Associated Documents</b>	<b>State and Commonwealth Legislation, Standards / Codes of Practice / Industry Guidelines</b> <ul style="list-style-type: none"> <li><a href="#">Children's Hospital Westmead (CHW) (2008) Pain Management Guideline</a> in pdf.</li> <li>Shann, F (2008) Drug Doses, 14th Ed, Intensive Care Unit, Royal Childrens Hospital.</li> <li>Sydney West Area Health Service (2008). The Administration of Intranasal Fentanyl for Paediatric Patients (v4).</li> <li>www.intranasal.net</li> <li>Royal Children's Hospital Clinical Practice Guidelines (Intranasal Fentanyl and Naloxone) accessed online 9/2018</li> <li>Australian Medicines Handbook (online version, 2010)</li> <li>Paediatric Pharmacopoeia. <a href="#">RCH pharmacopoeia</a></li> </ul>	
<b>MANDATORY INCLUSION</b> <i>Personal information and health information as defined in the relevant Victorian law, which is required to be collected, used, disclosed and stored by BHCG in order to achieve the Purpose of this policy, will be handled by the Group and its employees in accordance with their legal obligations.</i> <i>When developing this policy, BHCG has taken all reasonable steps to make its content consistent with the proper discharge of its obligations under the Charter of Human Rights and Responsibilities Act 2006</i>		
<b>Responsible Department</b>	Emergency Department - NUM	
<b>Approved By</b>	Acute Health & Clinical Support Services Clinical Standards Committee.	01/11/2018
<b>Authorised By</b>	Medication Safety Committee	28/11/2018

**APPENDIX 1:  
INTRANASAL FENTANYL DOSING SCHEDULE**

<b>Weight estimate in kg</b>	<b>Initial dose (1.5mcg/kg)</b>	<b>Volume - initial dose (ml)</b>	<b>Subsequent dose (0.75 - 1.5mcg)</b>	<b>Volume – subsequent dose (ml)</b>
10	15 mcg	0.3 ml	7.5 - 15 mcg	0.15 - 0.3 ml
12	18 mcg	0.35 ml	9 - 18 mcg	0.2 - 0.35 ml
14	20 mcg	0.4 ml	10 - 20 mcg	0.2 - 0.4 ml
16	24 mcg	0.5 ml	12 - 24 mcg	0.25 - 0.5 ml
18	27 mcg	0.55 ml	13.5 - 27 mcg	0.25 - 0.55 ml
20 - 24	30 mcg	0.6 ml	15 - 30 mcg	0.3 - 0.6 ml
25 - 29	37.5 mcg	0.75 ml	18.75 - 37.5 mcg	0.35 - 0.75 ml
30 - 34	40 mcg	0.8 ml	20 - 40 mcg	0.4 - 0.8 ml
35 - 39	52.5 mcg	1.05 ml	26.5 - 52.5 mcg	0.5 - 1.05 ml
40 - 44	60 mcg	1.2 ml	30 - 60 mcg	0.6 - 1.2 ml
45 - 49	67.5 mcg	1.35 ml	67.5 mcg	0.65 - 1.35 ml
> 50	75 mcg	1.5 ml	37.5 - 75 mcg	0.75 - 1.5 ml

**Note:** Volumes have been rounded to the nearest 0.05ml