



NEONATAL

**FENTANYL**



This document should be read in conjunction with this [DISCLAIMER](#)

**⚠ HIGH RISK Medication**

Rapid administration can lead to chest wall rigidity.  
Incorrect dosing of opioids can lead to potentially lethal respiratory depression, excessive sedation or inadequate analgesia.

<b>Presentation</b>	Syringe: 20 microg/2mL (KEMH) Ampoule: 100 microg/2mL
<b>Description</b>	Opioid analgesic
<b>Indications</b>	<ul style="list-style-type: none"> <li>• Elective endotracheal intubation</li> <li>• Analgesia</li> </ul>
<b>Dose</b>	<p><b><u>ELECTIVE ENDOTRACHEAL INTUBATION</u></b></p> <p><b>IV Bolus:</b> 4 microg/kg over 3 minutes</p> <p><b><u>ANALGESIA</u></b></p> <p><b>IV Bolus:</b> 1 to 2 microg/kg over 3 minutes every 2 to 4 hours as required.</p> <p><b>IV Continuous Infusion:</b> 1 to 5 microg/kg/hour</p>
<b>Adverse Reactions</b>	<p><b>Common:</b> Laryngospasm, Bradycardia Chest wall rigidity (responds to Naloxone) Urinary Retention (with continuous infusion)</p> <p><b>Serious:</b> Respiratory Depression, Opioid withdrawal symptoms in neonates treated for greater than 5 days via continuous infusion</p>
<b>Monitoring</b>	Respiratory and cardiovascular status, urine output with continuous infusion
<b>Compatible Fluids</b>	Sodium Chloride 0.9%, Glucose 5%, Glucose 10%

<b>Preparation</b>	<p><b><u>IV Bolus:</u></b> Use prefilled syringes if available.</p> <p><b><i>Dilution:</i></b> Take 50 microg (1mL) of fentanyl from an ampoule and make up to 5mL with a compatible fluid.</p> <p><u>Concentration is 10 microg/mL fentanyl</u></p> <p><b><u>IV Infusion:</u></b> Use Fentanyl 100microg/2mL ampoules to prepare.</p> <p>Withdraw 50 microg (1mL) of fentanyl per Kg of babies weight and dilute to 50 mL with a compatible fluid.</p> <p><u>1 mL/hr = 1 microg/kg/hour</u></p>
<b>Administration</b>	<p><b>IV Bolus:</b> Slow push over 3 minutes, then a slow flush for residual medication in the tubing.</p> <p><b>IV Continuous Infusion:</b> Administer as a continuous infusion via syringe pump</p>
<b>References</b>	<p>UpToDate [Internet], Fentanyl paediatric. Alphen aan den Rijn (Netherlands): Wolters Kluwer; 2017 [cited 2017 Oct 6]. Available from: <a href="https://www.uptodate.com/">https://www.uptodate.com/</a></p> <p>Truven Health Analytics. Fentanyl. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2017 [cited 2017 Oct 18]. Available from: <a href="https://neofax.micromedexsolutions.com/">https://neofax.micromedexsolutions.com/</a></p> <p>Phelps SJ, Hageman TM, Lee KR, Thompson AJ. Pediatric injectable drugs : the teddy bear book. Tenth ed. Bethesda (Maryland): American Society of Health-System Pharmacists; 2013. 796 p.288-290</p>

Document owner:	Head of Department - Neonatology		
Author / Reviewer:	KEMH & PCH Pharmacy / Neonatology Directorate		
Date first issued:	August 2013	Version:	3.0
Last reviewed:	October 2017	Next review date:	October 2020
Endorsed by:	WNHS Neonatal Directorate	Date:	October 2017
Standards Applicable:	<p>NSQHS Standards:</p> <p>1  Clinical Care is Guided by Current Best Practice</p> <p>4  Medication Safety</p>		
<p><b>Printed or personally saved electronic copies of this document are considered uncontrolled.</b>  <b>Access the current version from the WNHS website.</b></p>			

© Department of Health Western Australia 2017