

**Prescribing Protocol SESLHDPR/637  
Fentanyl 2 microg/mL with Adrenaline  
(epinephrine) 2 microg/mL and Bupivacaine  
0.1%**



<b>Prescribing Protocol - Fentanyl 2microg/mL with Adrenaline (epinephrine) 2 microg/mL and Bupivacaine 0.1% epidural infusion</b>	
<b>Areas where Protocol/Guideline applicable e.g. District, Hospital, ITU, Ward</b>	District-wide
<b>Areas where Protocol/Guideline not applicable</b>	N/A
<b>Authorised Prescribers</b>	Anaesthetists, Anaesthetic Registrars, Pain Specialists
<b>Indication for use</b>	Pain Management
<b>Clinical condition</b> Patient selection: Inclusion criteria (list investigations necessary and relevant results)	Peri-operative pain management Rib fracture analgesia Each individual patient's risk / benefit assessment will be considered by the prescriber
<b>Contra-indications</b>	Severe coagulation disturbances Patient refusal Allergy to local anaesthetics Localised infection at insertion site
<b>Precautions</b>	Hypotensive patients Patients with pre-existing neurological disease Anticoagulant and antiplatelet drugs
<b>Place in Therapy</b> State whether drug to be used as first, second or third line. When not first line, describe therapies to be used first. (Consider using algorithm)	First-line

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<p><b>Dosage</b> (Include dosage adjustment for specific patient groups)</p>	<p>Suggested starting dose 8-10mL/hr (range 6-12 mL/hr) Delivered via Continuous Infusion (CI) or Programmed Intermittent Epidural Bolus (PIEB) and/or Patient Controlled Epidural Bolus (PCEA). Refer to <a href="#">Pain Management - Epidural Analgesia (Adult) non-obstetric procedure SESLHD/324</a>.</p> <p>Example prescription (to be prescribed on <a href="#">NSW Health Epidural Analgesia Adult Form SMR130.022</a>): PIEB 4mL every 30mins + PCEA 3mL every 15mins PRN. Hourly limit 24mL</p>
<p><b>Duration of therapy</b></p>	<p>2 to 5 days</p>
<p><b>Administration instructions</b></p>	<p>Premixed infusion bags <b>must</b> be used. Administer using a sterile single-use administration set via programmable pump</p>
<p><b>Availability and supply</b></p>	<p>Premixed bupivacaine with fentanyl and adrenaline (epinephrine) bags are a compounded Schedule 8 product prepared by Baxter Healthcare with an expiry date of 90 days.</p> <p>A form C must be completed by the Staff Specialist prior to first order.</p> <p>The supply of bags is maintained and stored in Pharmacy.</p> <p>Nursing staff must monitor expiry dates of the epidural pre-mixed bags on the ward and order from Pharmacy in a timely manner. The turnaround time to order from Baxter via Pharmacy is two days.</p> <p>There is 1 bag available in the Post Acute Care Unit (POWH only).</p>
<p><b>Monitoring requirements</b></p>	<p>Observations and monitoring as per <a href="#">NSW Health Epidural Analgesia Adult Form SMR130.022</a> and <a href="#">Pain Management - Epidural Analgesia (Adult) non-obstetric procedure SESLHD/324</a>.</p>
<p><b>Management of complications</b></p>	<p>Intravenous fluid bolus Pharmacological management Contact Acute Pain Service during business hours, and the anaesthetist on call after hours for advice.</p>

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<p><b>Basis of Protocol/Guideline</b> (including sources of evidence, references)</p>	<p>ANZCA Acute Pain Management: Scientific Evidence Fifth Edition 2020:</p> <p>'In postoperative thoracic epidural infusion, the addition of adrenaline to fentanyl and ropivacaine or bupivacaine improved analgesia.' Level II evidence (Evidence obtained from at least one properly designed randomised-controlled trial).</p> <p>Sakagutchi et al. Does Adrenaline Improve Epidural Bupivacaine and Fentanyl Analgesia After Abdominal Surgery? <i>Anaesth Intensive Care</i> 2000; 28: 522-526.</p> <p>Niemi G, Breivik H. The minimally effective concentration of adrenaline in a low-concentration thoracic epidural analgesic infusion of bupivacaine, fentanyl and adrenaline after major surgery. <i>Acta Anaesthesiol Scand</i> 2003; 47: 439-450.</p> <p>Kjonikksen J et al. Stability of an epidural analgesic solution containing adrenaline, bupivacaine and fentanyl. <i>Acta Anaesthesiol Scand</i> 2000; 44: 864–867.</p> <p>Brustugun J et al. The stability of a sulphite-free epidural analgesic solution containing fentanyl, bupivacaine, and adrenaline. <i>Acta Anaesthesiol Scand</i> 2013; 57: 1321–1327.</p> <p>Priston MJ et al. Stability of an epidural analgesic admixture containing epinephrine, fentanyl and bupivacaine. <i>Anaesthesia</i> 2004; 59: 979-983.</p>
<p><b>Groups consulted in development of this protocol</b></p>	<p>Department of Anaesthesia and Pain Management, Prince of Wales Hospital</p> <p>Pharmacy Department, Prince of Wales Hospital</p>

<b>AUTHORISATION</b>	
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<b>GOVERNANCE</b>	
Renewal date	February 2021
Expiry date: (maximum 36 months from date of original approval)	29 February 2024
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Chairperson, QUM Committee	Dr John Shephard
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