

Fentanyl 2 microg/mL with Adrenaline (epinephrine) 2microg/mL and Bupivacaine 0.1% Epidural infusion



Areas where Protocol/Guideline applicable	SESLHD Inpatients
Authorised Prescribers:	Anaesthetists, Anaesthetic Registrars, Pain Specialists
Indication for use	Pain Management
Clinical condition	Peri-operative pain management Rib fracture analgesia Each individual patient's risk / benefit assessment will be considered by the prescriber
Proposed Place in Therapy	First-line
Contra-indications	Severe coagulation disturbances Patient refusal Allergy to local anaesthetics Localised infection at insertion site
Precautions	Hypotensive patients Patients with pre-existing neurological disease Anticoagulant and antiplatelet drugs
Important Drug Interactions	Caution when combined with opioids given via a different route.
Dosage	Suggested starting dose 8 to 10 mL/hr (range 6 to 12 mL/hr) Delivered via Continuous Infusion (CI) or Programmed Intermittent Epidural Bolus (PIEB) and/or Patient Controlled Epidural Bolus (PCEA). Refer to Pain Management - Epidural Analgesia (Adult) non-obstetric procedure SESLHD/324 . Example prescription (to be prescribed on NSW Health Epidural Analgesia Adult Form SMR130.022): PIEB 4mL every 30mins + PCEA 3mL every 15mins PRN. Hourly limit 24mL
Duration of therapy	2 to 5 days
Prescribing Instructions	Example prescription (to be prescribed on NSW Health Epidural Analgesia Adult Form SMR130.022)
Administration Instructions	Premixed infusion bags must be used. Administer using a sterile single-use administration set via programmable pump
Availability and Supply	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. A form C was completed by the Staff Specialist prior to first order.

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	<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 2 days.</p> <p>The premixed bag is available in the Post Acute Care Unit (POWH only).</p>
Monitoring requirements	<p>Observations and monitoring as per NSW Health Epidural Analgesia Adult Form SMR130.022 and Pain Management - Epidural Analgesia (Adult) non-obstetric procedure SESLHD/324.</p>
Management of Complications	<p>Intravenous fluid bolus</p> <p>Pharmacological management</p> <p>Contact Acute Pain Service during business hours, and the anaesthetist on call after hours for advice.</p>
Basis of Protocol/Guideline: (including sources of evidence, references)	<p>ANZCA Acute Pain Management: Scientific Evidence Fifth Edition 2020: '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>
Groups consulted in development of this guideline	<p>Department of Anaesthesia and Pain Management, Prince of Wales Hospital</p> <p>Pharmacy Department, Prince of Wales Hospital</p>

Medicine Guideline

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GOVERNANCE	
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