EPIDURAL ANALGESIA – Continuous Infusion (Non-Maternity)

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM
Epidural analgesia is an effective modality of pain management that provides pain relief by continuous administration of pharmacological agents, usually local anaesthetic plus an opioid, into the epidural space via an indwelling catheter.

PATIENT
This document details the management of post-surgical patients receiving epidural analgesia via a continuous infusion enabling the patient to receive optimum pain relief safely and effectively via the epidural route.

2. STAFF
- Acute pain relief service
- Anaesthetists
- Medical
- Midwifery and nursing staff

3. EQUIPMENT
- Dedicated epidural pain management pump specifically for continuous and rescue bolus epidural infusion.
- Compatible (yellow) epidural administration set and lock box.
- Premix solution as per epidural orders.
- Epidural (yellow) patient label and line sticker.

4. CLINICAL PRACTICE
- Prescribe the continuous epidural infusions (Non-Maternity) on the NSW State Epidural Analgesia Adult Chart (NH700039). For doses refer to Appendix 1.
- Label the infusion bag with an epidural (yellow) sticker including the patient’s name, and place yellow sticker on the line. This must be checked by second Midwife/RN.
- Observe that the following are correct:
  o Epidural infusion solution and pump program against the medical orders.
  o Epidural (yellow) infusion set is connected to the epidural filter
  o The infusion record must be completed by the two Midwives/RNs.
  o Loading/changing the bags or changing the program must be checked by two Midwives/RNs.
- Explain to the patient:
  o The rationale for using an epidural continuous infusion
  o How long it will be used for
  o The need for ongoing observations
- Change all epidural fluids every 24 hours.
- Change all epidural administration sets every 72 hours.
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- Ensure that the patient has a patent intravenous cannula with which to manage any side effects of the epidural therapy. This should remain in-situ 4 hours after the removal of the epidural.
- Perform observations as per Appendix 2 and document on the NSW State Epidural Analgesia Adult Chart (NH700039)
- Do not administer other opioids or sedatives unless ordered by APRS or Anaesthetist.
- Do not commence therapeutic anticoagulants until discussion with APRS, Anaesthetist or team
- Refer to Appendix 3 for problem solving

5. DOCUMENTATION
- NSW State Epidural Adult Chart (NH700039)
- Integrated Clinical Notes
- NIMC
- SAGO or HDU Observation Chart
- Relevant Clinical Pathway

6. EDUCATIONAL NOTES
For comprehensive notes refer to General Epidural Guidelines which includes information on:
- Nurse/Midwife Education
- Indications/rational
- Different uses & dosages within RHW
- Side effects
- General Management guidelines
- Removal of epidural catheter

7. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP
- Epidural analgesia – programmed intermittent epidural bolus (PIEB) and Patient controlled Epidural Analgesia (PCEA) – Delivery suite.
- Epidural Management Guidelines
- Neuraxial (intrathecal and/or epidural) opioid analgesia – single dose morphine only
- Medication administration – general principles for administration of medication
- Accreditation of staff to give drugs in specific units
- Sedation – Respiratory depression
- Naloxone – Guidelines for use of Naloxone.
- Labelling of injectable medicines, fluids and lines.

8. RISK RATING
High
EPIDURAL ANALGESIA – Continuous Infusion (Non-Maternity)  cont’d

9. REFERENCES
Appendix 1 - Doses

<table>
<thead>
<tr>
<th>Drug</th>
<th>Rate</th>
<th>Rescue Bolus dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ropivacaine 200mg (0.2%) and Fentanyl 200 mcg (2mcg/mL) in 100mL sodium chloride 0.9% (Premix)</td>
<td>4 – 14 mL/hr</td>
<td>3 - 4 mL</td>
</tr>
</tbody>
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Appendix 2 - Observations

<table>
<thead>
<tr>
<th>OBSERVATIONS</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vital Signs and Pain Scores</td>
<td>Hourly for the first six (6) hours and while the patient is unstable then every 2 hours thereafter</td>
</tr>
<tr>
<td>After Rescue Bolus (Blood Pressure and Pulse)</td>
<td>Every 10 minutes for 30 minutes and then one hour post bolus.</td>
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<tr>
<td>Motor Block (Use Bromage scale)</td>
<td>Every two (2) – four (4) hours and prior to mobilisation.</td>
</tr>
<tr>
<td>Sensory Block (Dermatome level check)</td>
<td>Check height and distribution of block with ice bilaterally and record dermatome levels every four (4) hours, prior to mobilisation and one (1) hour after a bolus dose.</td>
</tr>
<tr>
<td>Epidural catheter insertion site</td>
<td>Once per shift - preferably at shift change check for: Catheter position, signs of leakage, infection or bleeding.</td>
</tr>
<tr>
<td>Infusion pump settings</td>
<td>Commencement of each shift, on patient transfer and when bag is changed</td>
</tr>
<tr>
<td>Bladder function check</td>
<td>Once per shift patient should have indwelling urinary catheter if local anaesthetic infused via epidural.</td>
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</tbody>
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…../Appendix 3
### Appendix 3 – Problem Solving
(Summary – Refer to Epidural Management Guidelines for comprehensive information)

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
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</table>
| **Inadequate Analgesia**      | • Give prescribed epidural bolus and increase infusion rate by 1-2 mL within prescribed limits (Appendix 1).  
• If required, repeat after 30 minutes. If analgesia is inadequate after 2nd bolus notify APRS or Anesthetist. |
| **Sedation or Respiratory Depression** | • Call PACE Tier 1 if sedation score 2 or RR 6-10 per minute  
• Call PACE Tier 2 if sedation score 3 (responsive but unable to stay awake)  
• Call Code Blue if sedation score 3 (unresponsive) or RR ≤ 5 per minute  
• Stop infusion  
• Give supplemental oxygen at 15 litres/minute and support airway  
• Give Naloxone. Refer to Naloxone LOP.  
• Contact APRS or Anaesthetist. |
| **Motor Block**               | • If Bromage Scale 1, 2, or 3 DO NOT ambulate patient and call PACE Tier 1  
• If High Block >T7 Call PACE Tier 1  
• If High Block > T4 Call PACE Tier 2  
• Give supplemental oxygen  
• Sit the women up  
• Check height of the block every 30 minutes and follow management plan of PACE team. |
| **Spinal Cord Compression**   | • Observe for signs such as back pain, increasing motor block, bladder and bowel incontinence, numbness or tingling in lower legs.  
• Call APRS or Anaesthetist for urgent review. |
| **Hypotension**               | • If SBP 90-100mmHg call PACE Tier 1  
• If SBP ≤ 90mmHg call PACE Tier 2  
• Stop infusion  
• Lie patient flat with legs elevated  
• Prepare to give fluid bolus +/- ephedrine (as ordered by Doctor) |
| **Bradycardia**               | • If heart rate 40-50 bpm call PACE Tier 1  
• If heart rate ≤ 50 bpm call PACE Tier 2  
• Stop infusion  
• Ensure Atropine available in the clinical area. |
| **Nausea and vomiting**       | • Administer antiemetic’s as prescribed  
• Call APRS or Anaesthetist if not effective. |
| **Pruritus**                  | • Consider low dose Naloxone. Refer to Naloxone LOP  
• Use sedative antihistamine with caution  
• Call APRS or Anaesthetist if not effective. |
| **Urinary retention**         | • Contact patients primary care team for review +/- catheterisation |
| **Catheter Disconnection**    | • If catheter disconnected at the filter, do not reconnect.  
• Stop infusion.  
• Cover catheter end with sterile gauze.  
• Call APRS or Anaesthetist. |
| **Dressing Detached or Lifting** | • Reinforce only if catheter insertion site is NOT exposed  
• Call APRS or Anaesthetist if insertion site exposed. |