EPIDURAL ANALGESIA: INTERMITTENT AND/OR CONTINUOUS

Refer also to related standards:

- Epidural Analgesia/Anaesthesia: Catheter Removal
- Epidural Analgesia/Anaesthesia: General Considerations and Patient Education
- Epidural Infusions of Analgesics Combined with Local Anaesthetics

1.0 STANDARD

1.1 Registered Nurses (RN) caring for patients with intermittent and/or continuous epidural analgesia will follow the protocol outlined in this document, and in the related standards as indicated above.

1.2 Patients receiving spinal or epidural analgesia are cared for by an RN who has successfully completed the relevant education program.

1.3 All patients who have received spinal analgesia and have or are receiving epidural analgesia are cared for in the following areas:

- Operating Room (OR)
- Intensive Care Unit (ICU)
- Step Down Unit (SDU)
- Perianaesthesia Care Unit (PACU)
- Labour and Delivery Room (LDR)
- Post Partum Unit (3M)
- Surgical Units (4N/6N)

1.4 Patent intravenous (IV) access must be maintained for 24 hours after the last dose of epidural and/or spinal Morphine and 8 hours after the last dose of epidural Fentanyl.

1.5 Patients are to receive oxygen via nasal prongs at 4 litres/minute for 24 hours post-operative and prn.

1.6 Naloxone (Narcan) and 1 or 3 mL syringes will be readily available and accessible on all medication carts in the designated area.

1.7 Assessment of the patient's pain level will be accomplished using a 0 to 10 pain rating scale. The patient rates his/her pain with 0 representing no pain and 10 representing the worst pain.

1.8 The patient receiving epidural analgesia/anaesthesia will *not* receive any other analgesia or sedation unless specifically ordered by the Anaesthetist.

1.9 The Anaesthetist's orders for analgesia and sedation will remain in effect for 24 hours after the last bolus dose or the termination of the continuous infusion, when Morphine is used. When Fentanyl is used, this period is 8 hours.

2.0 PROTOCOL

General

2.1 Assess the patient's motor and sensory level in the legs every 4 hours. Report any impairment of sensation and/or motor response in the legs, and/or progressive increase in back pain, to the Anaesthetist immediately.

Intermittent Epidural Analgesia

2.2 Patient Assessment

- Assess blood pressure (BP), pulse (P), respirations (RR) and sedation scale (SS) every 30 minutes for 2 hours post injection, and then
  - BP, P and temperature every 4 hours,
  - RR and SS every hour and prn.
- Assess analgesia effectiveness using the pain rating scale of 0 to 10 every 2 hours while the patient is awake.
- Assess the patient for back pain every four hours. Report the presence of progressive back pain to the Anaesthetist on call immediately.
- Assess the epidural site and intactness and security of the epidural catheter and tape every 12 hours.
- Assess the motor and sensory level of the patient's legs every 4 hours
  - To check for motor response, ask the patient to move his/her legs and feet, one at a time. Assess for equal bilateral movement.
  - To check for sensory level, use a small piece of ice or a paper clip and gently touch each of the patient's thighs to test for sensation. Also touch the patient's cheek to compare the sensory response.
- Assess for side effects of nausea, vomiting, and pruritus prn.
- Assess bladder distension every 4 hours in the first 24 hours, then every 8 hours.
- Assess all monitoring components for 24 hours post last injection.

  Note: On the surgical units (4N/6N), Licensed Practical Nurses (LPN) may monitor the patient's pulse, blood pressure, and temperature starting 2 hours after each intermittent injection of analgesia.

2.3 Nursing Intervention

- Administer oxygen via nasal prongs at 4 litres/minute for 24 hours post-operative.
  - Except for patients in Labour/Delivery and patients on 3M following vaginal birth.
- Have Naloxone (Narcan) and syringes readily available and accessible on all medication carts.
- See the Anaesthetist's orders for the treatment of side effects.
- Notify the Anaesthetist on call when:
  - RR less than 10 or sedation scale = 3
  - As required for persistent pruritus, nausea, and vomiting not relieved by medication
  - **Inadequate analgesia**
  - Concerns related to epidural infusions

2.4 Documentation

- Document vital signs, pain rating, sedation scale, epidural catheter and dressing status on the Epidural Flowsheet.
- Document motor and sensory level and presence of back pain on the Epidural Flowsheet.
- Document the presence of side effects on the Epidural Flowsheet.
- Document medication administered to treat side effects on the Medication Administration Record (MAR) and on the Epidural Flowsheet.
- Document oxygen therapy, assessment of bladder function and treatment for bladder distension in the Nurses' Notes.

<u>Continuous Epidural Analgesia</u>

2.5 Patient Assessment

- Assess respirations (RR) and sedation scale (SS) every hour for the first 24 hours, and then every 4 hours and prn.
- Assess blood pressure (BP), pulse (P) and temperature according to the standard Post-Operative Vital Signs: Adults.

  Note: On the surgical units (4N/6N), Licensed Practical Nurses (LPN) may

monitor the patient's pulse, blood pressure, and temperature starting 2 hours after the beginning of the epidural infusion.

- Assess analgesia effectiveness using the pain rating scale of 0 to 10 every 2 hours until the patient is comfortable, then every 4 hours while the patient is awake.
- Assess RR and SS every 15 minutes for 30 minutes or until stable after prn IV narcotics or a prn epidural narcotic bolus has been administered.
- Assess the patient for back pain every 4 hours. Report the presence of progressive back pain to the Anaesthetist on call immediately.
- Assess the epidural site and intactness and security of the epidural catheter and tape every 12 hours.
- Assess the motor and sensory level of the patient's legs every 4 hours
  - To check for motor response, ask the patient to move his/her legs and feet, one at a time. Assess for equal bilateral movement.
  - To check for sensory level, use a small piece of ice or a paper clip and gently touch each of the patient's thighs to test for sensation. Also touch the patient's cheek to compare the sensory response.
- Assess for side effects of nausea, vomiting, and pruritus prn.
- Assess bladder distension every 4 hours in the first 24 hours, then every 8 hours.
- Assess all monitoring components for 24 hours after discontinuation of the epidural infusion.

2.6 Nursing Intervention

- Administer oxygen via nasal prongs at 4 litres/minute for 24 hours post-operative.
  - Except for patients in Labour/Delivery.
- Have Naloxone (Narcan) and syringes readily available and accessible on all medication carts.
- See the Anaesthetist's orders for the treatment of side effects.
- Notify the Anaesthetist on call when:
  - RR less than 10 or sedation scale = 3
  - As required for persistent pruritus, nausea, and vomiting not

relieved by medication
- **Inadequate analgesia**
- Concerns related to epidural infusions

- Ensure that the infusion pump lock mechanism is activated.

2.7 PRN IV Narcotic or Epidural Bolus Injection

- Assess RR and SS every 15 minutes for 30 minutes or until stable after prn IV narcotics or a prn epidural narcotic bolus injection has been given.

2.8 Changing the Infusion Rate

- Check the Anaesthetist's order.
- Unlock the infusion pump.
- Have a second RN witness the change in pump setting and ensure the pump lock mechanism is activated.
- Document the rate change on the Epidural Flowsheet, Nurses' Notes, and on the MAR.

2.9 Replacing the Infusion Bag

- The concentration of the infusion bags is 5 mg Morphine in 100 mL of Normal Saline.
- Store infusion bags in the fridge.
- Change infusion bags every 24 hours or when empty.
- When hanging a new bag, have a second RN witness the hanging of the bag, the resetting of the volume on the pump, and the reactivation of the pump lock mechanism.
- Record the fluid volume infused on the intake/output record.

2.10 Infusion Tubing Change

- Change the infusion tubing every 72 hours. Coincide this with a bag change.
- Use port-free tubing. **Do not use alcohol in any part of this procedure.**
- Prepare and prime the tubing with the narcotic solution using a no-touch technique. **Do not clamp off the epidural catheter.**
- Remove the old infusion tubing and attach a new set to the epidural catheter. Ensure that the luer lock connection is secure.

- Replace tubing in the infusion pump and open the clamp on the tubing. Reactivate the pump.

- Attach a label to the tubing, indicating when the tubing is due to be changed next.

- Document the tubing change in the Nurses' Notes.

2.11 Documentation

- Document vital signs, pain rating, sedation scale, epidural catheter and dressing status on the Epidural Flowsheet.

- Document motor and sensory level and presence of back pain on the Epidural Flowsheet.

- Document the presence of side effects on the Epidural Flowsheet.

- Document medication administered to treat side effects on the Medication Administration Record (MAR) and on the Epidural Flowsheet.

- Document oxygen therapy, assessment of bladder function and treatment for bladder distension in the Nurses' Notes.

- Document the rate of the infusion in the Epidural Flowsheet at the beginning and end of each shift. When there is a change in rate, record the new rate on the MAR and the Epidural Flowsheet.

3.0 REFERENCES

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4.0 APPROVALS

Approved by:	Department of Anaesthesia	January 24, 1997
	Pharmacy and Therapeutics Committee	January 28, 1997

	Surgical Program Committee	February 4, 1997
	Nursing Professional Practice Committee	February 17, 1997
Revised:	To new format	March 2002