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|  | **Epidural** **-** **Intrathecal** **Infusion** **for** **Pain** **Management** |
| **APPROVED** **BY:** |
| **DATE** **REVIEWED/REVISED:** | **FORMULATED** **BY:** NURSING PRACTICE SPECIALIST |

**SCOPE:** Hospital-wide

# PURPOSE:

To ensure safe initiation and management of the patient who is receiving a neuraxial analgesic infusion for pain management. The neuraxial analgesic infusion may be one of 4 possible programs:

* An **epidural** **infusion** that is a continuous infusion into the epidural space.
* An **intrathecal** **infusion** that is a continuous infusion into the intrathecal space.
* A **patient** **controlled** **epidural** **analgesia** **(PCEA)** **infusion** that is a continuous epidural infusion plus allowing the patient to self administer a bolus dose as well.
* A **patient** **controlled** **intrathecal** **analgesia** **(PCIA)** **infusion** that is a continuous intrathecal infusion plus allowing the patient to self-administer a bolus dose as well.

# POLICY:

1. Continuous epidural/intrathecal anesthesia is initiated and maintained under the direction of the Anesthesia Department.
2. Only qualified, credentialed, licensed anesthesia care providers as described by the American Society of Anesthesiologist and the American Association of Nurse Anesthetists, and/or as authorized by state law should perform the following procedures:
   * Obtain informed consent
   * Insertion, initial injection, bolus injection, re-bolus injection or initiation of a continuous infusion of medication for analgesia/anesthesia
   * Verification of correct catheter placement
   * Flushing of the neuraxial catheter
   * Re-start an infusion once it has been stopped
3. A registered nurse (RN) may manage the care of patients with catheters or devices for analgesia to alleviate acute post-surgical pain, labor pain, pathological pain or chronic pain. Management may include:
   * Monitoring the patient's vital signs, mobility, level of consciousness, and perception of pain
   * Monitoring the status of the fetus in the pregnant patient
   * Priming the infusion tubing with the ordered solution
   * Replacing empty infusion syringes or bags with new prepared solutions containing the same medication and concentration as ordered by the anesthesia provider
   * Stopping the continuous infusion if there is a safety concern for the patient or if the laboring patient has given birth.
   * Catheter may be removed by an RN if a specific order from an anesthesia provider is obtained, and the RN has been oriented to the procedure.
   * Initiating emergency therapeutic measures according to institutional policy and/or protocol if complications arise
4. All patients receiving an epidural/intrathecal analgesic infusion will have pulse oximetry monitoring, intravenous access and supplemental oxygen therapy as ordered.
5. The non-anesthetist registered nurse should not manipulate the patient controlled epidural analgesia (PCEA) or patient controlled intrathecal analgesia (PCIA) doses or dosage intervals at any time. (Exception: Pain Service RN's may change doses or intervals per department protocol)
6. Any action that requires disconnecting the infusion tubing from the catheter will be performed by an anesthesia provider
7. Prior to any neuraxial infusion initiation and with every medication vial/bag replacement, verification by two authorized personnel must include patient identification, correct medication, concentration, pump settings, and line attachment. Pump settings must also be reviewed at each shift change as a part of the handoff process.
8. Epidural/intrathecal medication must be clearly labeled as such.
9. An epidural/intrathecal filter must always be present on the catheter prior to initiation of the infusion.
10. The epidural/intrathecal medication shall be changed every 24 hours.
11. Epidural/intrathecal tubing shall be changed every 72 hours.
12. Narcotic neuraxial infusions are to be contained in a locked medication box during the infusion process.
13. When an epidural/intrathecal narcotic medication is discontinued, due to a change in the medication to be administered or due to removal of the catheter, the remaining solution must be wasted and documented. Refer to Narcotic Wastage Policy.
14. If the neuraxial catheter becomes dislodged or inadvertently disconnected, immediately notify the anesthesia department and discontinue the infusion.
15. Patients with a continuous neuraxial infusion must be cared for by a registered nurse who has been oriented to the procedure, received education specific to epidural/intrathecal infusion management, and demonstrate validation of competency.
16. No parental or oral sedatives, narcotics, or tranquilizers are to be administered except those ordered by an anesthesia provider during continuous neuraxial analgesia therapy.

# AUTHORIZED PERSONNEL:

Only credentialed, licensed anesthesia providers may initiate continuous epidural/intrathecal analgesia infusions. Registered nurses may care for a patient who is receiving continuous neuraxial analgesia if specific education requirements relating to management of the patient have been met and documented.

# [PROCEDURE:](https://internal.sanfordhealth.org/Fargo/References/Sapphire%20Quick%20Reference%20Card_Pain%20Management.pdf)

1. Verify patient has patent IV access.
2. Obtain appropriate standing orders for the neuraxial infusion.
3. Prior to starting the initial infusion, verify the correct patient, medication, concentration, pump settings and line attachment with the anesthesia provider present.
4. Verify neuraxial catheter is properly labeled and filter is present.
5. Observe and monitor neuraxial catheter and tubing for placement and integrity. Do not remove tape used to secure dressing. Dressing may be reinforced.
6. Observe and monitor insertion site for signs of infection every 8 hours.
7. Monitor effected extremities for strength and sensation per obstetrical standing orders and ambulation protocol. **If** **sudden** **changes** **in** **strength** **or** **sensation** **occur,** **notify** **the** **anesthesia** **department** **immediately.**
8. Monitor and document vital signs as per practitioner orders
9. To assess the patient’s level of sedation, use the Pasero Opioid-Induced
10. Sedation Scale (POSS). Monitoring sedation allows for early detection of unwanted oversedation, as increasing sedation generally precedes respiratory depression (Jarzyna, 2011).

S=Sleep, easy to arouse 1=Awake and alert

2=Slightly drowsy, easily aroused

3=Frequently drowsy, arousable, drifts off to sleep during conversation 4=Somnolent, minimal or no response to physical or verbal stimulation

1. If the dosage or frequency of medication is being increased, and/or if the drug is changed to a different opioid:
   * The assessment and documentation of patient’s sedation level, respiratory rate, oxygen saturation, and pain level should be restarted as described in the steps above.
2. Monitor for side effects of the medication such as respiratory depression, hypotension, pruritis, nausea, vomiting, urinary retention and allergic reaction. Treat side effects per standing orders.
3. Use continuous electronic monitoring for parturient in labor.

# DOCUMENTATION:

1. Rate and mode of neuraxial infusion.
2. Vital signs
3. Pain level before and after neuraxial infusion started, then as per pain management policy.
4. Any side effects and nursing interventions.
5. Amount of infusion per shift.
6. Education of patient or family.

# REFERENCES:

1. North Dakota Board of Nursing - Practice Statement for the Role of the Registered Nurse in Management of Analgesia b Catheter Techniques for Pregnant Patients, October 2012.
2. North Dakota Board of Nursing - Practice Statement for the Role of the Registered Nurse in the Management of Analgesia by Catheter Techniques for Non-obstetrical Clients, October 2012.
3. American Society of Anesthesiologists - Statement on the Role of Registered Nurses in the Management of Continuous Regional Analgesia, October 2013.
4. AACN Procedure Manual for Critical Care, 6th Edition, 2011
5. AWHONN Role of the Registered Nurse (RN) in the Care of the Pregnant Woman Receiving Analgesia/anesthesia by Catheter Techniques (Epidural, Intrathecal, Spinal, PCEA Catheters) Position Statement, 2015. Doi: <http://dx.doi.org/10.1111/1552-6909.12532>
6. Jarzina, D. et al. (2011). American society for pain management nursing guidelines on monitoring for opioid-induced sedation and respiratory depression. *Pain* *Management* *Nursing* 12(3), 118-145.