Provision of Pain Relief by Medication Administered via Continuous Catheter or other Pain Relief Devices

Formerly Position Statement Number 2.8

A critical component in the delivery of anesthesia care is pain management. The relief of pain may be accomplished in a variety of ways. The use of continuous catheters or other pain relief devices through which medication is infused are examples of some of the methods used to relieve pain. Technological advances over the past several years have resulted in the ability to deliver analgesics and anesthetics via a variety of catheter techniques, and the use of continuous peripheral nerve catheters offers prolonged pain relief to patients well into the postoperative period. The use of continuous catheters for the relief of pain is an excellent approach to pain management.

Advances in technology (e.g., ultrasound and peripheral nerve stimulators) offer improved accuracy and success in catheter placement with reduced complications. Although pain can be treated by multiple modalities, one of the most effective ways to relieve surgical pain is the use of continuous nerve blocks which offer the benefits of prolonged analgesia with fewer side effects, earlier mobilization, improved rehabilitation, decreased opioid consumption, greater patient satisfaction, and a more rapid functional recovery after surgery.

Through education and individual clinical experience, CRNAs possess the necessary knowledge and skills to employ therapeutic, physiological, pharmacological, interventional, and psychological modalities in the management and treatment of pain. As such, CRNAs have the ability to determine the need for, insert, and manage continuous epidural, intrathecal, intrapleural, and peripheral nerve catheters and other pain relief devices to facilitate therapeutic, operative, or diagnostic procedures. In addition, CRNAs have the knowledge to recognize and manage any complications associated with these techniques. The placement and use of continuous catheters (e.g., epidural, intrathecal, intrapleural, peripheral) and other pain relieving devices is within a CRNA’s scope of practice. It is incumbent upon the individual CRNA to assure his or her competency when using these techniques.

The administration and management of epidural or spinal anesthesia should only be performed by a professional educated in the specialty of anesthesia, skilled in these techniques, and authorized through clinical privileges or a position description to do the following: patient assessment, selection of medications and techniques, catheter placement, test-dosing, initial dosing, monitoring, and reinjection of a catheter with medications to facilitate therapeutic, operative, or diagnostic procedures.

With the increasing use of continuous catheter techniques for the provision of analgesia in surgical and other procedures not involving labor and delivery, other healthcare professionals (e.g., registered nurses) often become involved with the management of these catheters (e.g., epidural, peripheral). Registered nurses practicing in accordance with their state’s rules and regulations and their institution’s policies and procedures may manage continuous catheters for the relief of pain in nonlaboring patients after an anesthesia professional has placed the catheter or infusion device, administered the medication test-dose to determine correct catheter or infusion device placement, and established a safe analgesic level for acute or chronic pain relief. In order for a registered nurse to be successful in his or her management and monitoring of analgesia via catheter techniques, there must be adequate preparation and support in place including education and skill development, policies and procedures, and ongoing quality improvement activities.
After insertion of a continuous catheter and establishment of adequate analgesia in the nonlaboring patient by a qualified anesthesia professional, there are many activities associated with maintenance and management of the catheter that a registered nurse may be involved with, provided certain criteria are met. These activities often are guided by written protocol and may include: start an infusion to a catheter, adjust the rate of a catheter infusion, and discontinue a catheter infusion; administer analgesic boluses through the catheter infusion device; replace empty infusion medication containers; assess the catheter insertion site and integrity of the administration system; assess analgesic efficacy and manage or treat analgesic-related side effects; and remove the catheter after an uncomplicated insertion and management course. Registered nurses should not adjust the position of a continuous catheter. The criteria that should be met in order for a registered nurse to perform these activities include:

- State laws and institutional policies/procedures do not prohibit this practice.
- The registered nurse assumes care of the nonlaboring patient only after verification of correct catheter or infusion device placement and stabilization of the patient’s vital signs by the anesthesia professional.
- The anesthesia professional, or another qualified provider, is available for consult as needed.
- The registered nurse providing care for nonlaboring patients receiving catheter or infusion device analgesia for acute or chronic pain relief must:
  - demonstrate knowledge of pertinent anatomy, physiology, pharmacology, and the potential complications related to the analgesia technique being used and medication(s) being administered;
  - use appropriate monitoring modalities, be able to interpret physiological responses, and initiate interventions to insure optimal patient care;
  - recognize potential complications of the analgesia in relationship to the type of catheter/infusion device and medication(s) being administered and institute appropriate interventions in compliance with the anesthesia professional or attending physician guidelines or orders;
  - have access to guidelines for patient monitoring, drug administration and protocols for dealing with potential complications or emergency situations
- The facility has in place a method for continued competency assessment of registered nurses engaged in this practice.
- The registered nurse has a thorough understanding of the legal ramifications of providing this care, including his or her responsibilities and liability insurance requirements.

Registered nurses also play an important role in the care of laboring patients with continuous epidural catheters. After establishment of adequate analgesia by a qualified anesthesia professional, there are many activities that a registered nurse may perform when caring for the laboring patient with a continuous epidural catheter. These activities include: monitoring the patient’s vital signs; replacing empty infusion syringes or infusion bags according to an anesthesia professional’s orders; stopping the infusion; removing the epidural catheter upon order by the anesthesia professional after an uncomplicated insertion and management course; and initiating emergency measures if complications occur.

The insertion, initial injection, reinjection, or continuous infusion of epidural catheters for anesthesia or analgesia for the obstetrical patient in labor should only be performed by a qualified anesthesia professional.

References