Registered Nurse Management and Monitoring of Analgesia by Catheter Techniques: Position Statement

Chris Pasero, MS, RN-BC, FAAN,* Nancy Eksterowicz, MSN, RN-BC, APN,† Maggie Primeau, RN, MBA, MS, APRN-BC,‡ and Charlene Cowley, MS, RN, CPNP§

ABSTRACT:
The American Society for Pain Management Nursing believes that the administration of analgesia and the management of the associated effects are fundamental nursing responsibilities. This position statement will address the registered nurse’s responsibilities for the management and monitoring of analgesia by catheter techniques in all patients of all ages and in all care settings. It will provide recommendations for the health care institution, licensed independent practitioner, and registered nurse to ensure the safe and effective implementation of these pain control methods. The position statement reinforces the American Society for Pain Management Nursing’s belief that the administration of analgesia by catheter techniques is within the registered nurse scope of practice.

The field of pain management has experienced rapid advances in research and technology over the past several years. Analgesia delivered by catheter techniques, such as intraspinal analgesia and perineural infusions, once rarely used, are commonplace in the health care arena today. However, with such growth has come a lack of clarity about the nurse’s responsibilities in managing these techniques. Inconsistent policies and procedures among institutions and even between patient care areas within an institution have left nurses confused and open for liability. Nurses often report that they are able to care fully for patients receiving analgesia by catheter techniques in one patient care area but not in another. For example, registered nurses (RNs) within the same institution may be allowed to increase the rate of an epidural analgesic infusion in a neonate but are prohibited from doing so in a patient in labor. The American Society for Pain Management Nursing (ASPMN) believes that RNs, by virtue of their assessment abilities, knowledge of catheters and infusion devices, and 24-hour presence, are critical to ensuring safe and effective analgesic therapy by catheter techniques. Further, the ASPMN holds the position that personal perception or bias unsupported by scientific evidence is not adequate...
BOX 1. ANALGESIA BY CATHETER TECHNIQUES

- Epidural Analgesia: Administration of analgesic(s) (e.g., opioids and local anesthetics) into the epidural space by single or intermittent bolus injection, continuous infusion, and patient-controlled epidural analgesia with or without continuous infusion. Short-term epidural analgesia is administered through a temporary catheter and external infusion device. Long-term administration is provided by either a tunneled catheter and external infusion device or implanted catheter and implanted refillable infusion device.

- Indications for short-term epidural analgesia include postoperative pain, procedural pain, trauma pain, labor pain, and some types of nonsurgical pain (e.g., sickle cell-related lower extremity pain), cancer pain, and chronic nonmalignant pain.

- Indications for long-term epidural analgesia include chronic (persistent) cancer pain and chronic nonmalignant pain.

- Intrathecal (Spinal) Analgesia: Administration of analgesic(s) (e.g., opioids) into the subarachnoid space (called the intrathecal space in the caudal area of the spine) by single injection for relatively brief pain control or by infusion for extended pain control. Long-term administration is provided most often by an implanted intrathecal catheter and implanted refillable infusion device.

- Indications for short-term use include postoperative pain, procedural pain, and labor pain.

- Indications for long-term use include chronic (persistent) cancer pain and chronic nonmalignant pain.

- Interpleural analgesia: Administration of local anesthetic by single or intermittent bolus or continuous infusion through a catheter to nerves proximal to the pleural surfaces for diffusion within the pleural cavity.

- Indications for short-term use include some postoperative pain (e.g., biliary duct surgery) and trauma pain (e.g., after rib fracture).

- Indications for long-term use are rare and include some types of difficult-to-manage cancer pain (e.g., brachial plexus tumor invasion, vertebral metastases) and chronic nonmalignant pain (e.g., postherpetic neuralgia).

- Perineural local anesthetic infusion: Administration of local anesthetic through a catheter or catheters inserted near the affected peripheral nerves or nerve plexus. Therapy is generally short term using an external infusion device for continuous infusion with or without patient-controlled analgesia capability. Patients are often discharged to the home setting with a portable infusion device.

- Indications for use include postoperative pain and some types of cancer pain and chronic nonmalignant pain.

REFERENCES

justification for refusing to care for patients receiving analgesia by catheter techniques.

POSITION STATEMENT
It is within the scope of nursing practice for an RN to administer analgesia to patients when indicated. The ASPMN supports the role of the RN in the management and care of patients receiving analgesia by catheter techniques, including but not limited to analgesia by the epidural, intrathecal, interpleural, and perineural routes of administration, in patients of all ages and in all care settings.

BACKGROUND
The nursing profession is committed to the provision of comfort and the prevention of pain (ANA, 2001). One key component to the provision of comfort is the administration of analgesic medications. Analgesic administration is within the scope of nursing practice and has long been identified as an essential nursing responsibility (ANA, 2005; ASA, 2002; ASPMN, 2002; Ladwig & Ackley, 2005). The RN is widely recognized as the patient’s pain manager in the home, hospital, and other care settings (ASPN, 2003; Pasero, Portenoy, McCaffery, 1999b).

Nurses have a long history of administration and management of analgesia by traditional routes of administration such as the oral, intramuscular, and intravenous routes (Pasero et al., 1999b). Advances in technology over the past several years have resulted in analgesics being administered by a variety of catheter techniques (Box 1, Analgesia by Catheter Techniques). This article
defines the role of the RN in the management and monitoring of these techniques.

Analgesic requirements vary among patients, and analgesic therapy must be individualized to meet each patient’s unique needs (APS, 2003; Pasero et al., 1999b). The widespread use and popularity of patient-controlled analgesia and patient-controlled epidural analgesia in patients, including pediatric, geriatric, labor, oncology, and surgical, attests to the value of individualized therapy (Acute Pain Management Guideline Panel, 1992; American Academy of Pediatrics (AAP) & American Pain Society (APS), 2001; Grass, 2005; Halpern et al., 2004; Miaskowski et al., 2005; Pasero et al., 1999b; Pasero, 2003b; 2003c; Tobias, 2005). This is true of analgesia by all routes of administration and underscores the appropriateness of nurses being involved in ongoing management and monitoring of analgesia by catheter techniques.

In 1991 the American Nurses Association (ANA) facilitated a meeting of nurse representatives from a variety of professional nursing specialty organizations for the purpose of developing a position statement on the role of the RN in the management of analgesia by catheter techniques (ANA, 1991). This was in response to an increase in the administration of analgesia by catheter techniques nationwide. The underlying assumption was that competent RNs should have a significant role in the administration and monitoring of analgesia by catheter techniques in all patients and care settings. The ANA position statement that came from that meeting was endorsed by numerous specialty nursing organizations and state boards of nursing and has guided nursing practice in a variety of settings since its inception (Pasero et al., 1999b). Currently, there is no evidence that the administration of analgesia through catheter techniques by a competent RN poses a danger in any way to patients. The ASPMN believes that the safe administration of analgesia and the management of the associated effects are fundamental nursing responsibilities.

In addition, the ASPMN believes that RNs, by virtue of their assessment abilities, knowledge of catheters and infusion devices, and 24-hour presence, are, in fact, critical to ensuring safe and effective analgesic therapy by catheter techniques.

Adequate RN preparation and support accomplished through education, skill development, policy and procedure, and quality improvement activities are essential to the RN’s management and monitoring of analgesia by catheter techniques (Pasero, 2003a; 2004). A collaborative approach among nursing, medicine, and other disciplines is recommended in the development, implementation, and maintenance of these processes (ASA, 2002; Bird & Wallis, 2002; Pasero, Gordon, McCaffery, & Ferrell, 1999a; Richardson, 2001).

**ETHICAL TENETS**

The ethical principles of beneficence (duty to benefit another) and nonmaleficence (duty to do no harm) support the RN’s role in the management of medications administered by catheter techniques for pain relief. Provision 4.1 of the ANA Code of Ethics states that the RN “retains accountability and responsibility for the quality of practice and for conformity with standards of care” (ANA, 2001). These principles and provision oblige RNs to acquire the knowledge and expertise necessary to make appropriate assessments and responsible decisions about patient care that are based on objective and scientifically sound information. Personal perception or bias is not adequate justification for refusing to care for patients receiving analgesia by catheter techniques. The ASPMN believes that the safe administration of analgesia and the management of the associated effects are fundamental nursing responsibilities.

**DEFINITIONS**

**Additional Education and Training for the RN:** As defined by the individual RN’s institution/health care facility and the board of nursing of the state in which the RN practices.

**Analgesia:** Absence of pain in response to a stimulus that is normally painful (Benzon, 2005).

**Anesthesia:** Absence of all sensory modalities (Benzon, 2005).

**Catheter Techniques:** All non-intravenous catheters used to provide analgesia, including but not limited to analgesia administered by the epidural, intrathecal, interpleural, and perineural routes of administration. A catheter technique may be used for any type of pain that is responsive to this method of pain control.

**Infusion Device:** An external or implanted pump used to administer analgesia.

**Licensed Independent Practitioner (LIP):** For the purposes of this position statement, this person is defined as a physician, nurse anesthetist, nurse practitioner, advanced practice nurse, or physician assistant who has been trained and authorized to provide analgesia by catheter techniques.

**Management:** As defined by the individual RN’s institution/health care facility and the board of nursing of the state in which the RN practices. This may include reinjection of medication (bolus dose) after establishment of an appropriate therapeutic range and adjustment of drug infusion rate in compliance with an LIP’s orders, treatment of side effects and complications, replacement of empty drug reservoirs, refilling implanted drug reservoirs, troubleshooting infusion device, changing infusion device batteries, tubings, and dressings, discontinuing therapy in compliance with an LIP’s orders, and removing catheters.
Monitoring: As defined by the individual RN’s institution/health care facility and the board of nursing of the state in which the RN practices. This includes observation of the patient’s response to analgesia by catheter technique, including assessment of pain, side effects, and complications.

Pain: An intrinsically subjective experience that is multifactorial in nature and involves the interaction of physiologic, psychologic, behavioral, developmental, and situational factors for the end response of all types of pain (AAP & APS, 2001). It may be experienced by persons of all ages from the preterm neonate to the older adult.

RECOMMENDATIONS

Catheter Placement, Initial Test Dosing, and Establishment of Analgesic Dosage Parameters

Placement of a catheter or infusion device, administration of the test dose or initial dose of medication to determine correct catheter or infusion device placement, and establishment of analgesic dosage parameters for patients with pain should be done only by LIPs who are trained and authorized by catheter technique. This includes assessment of pain, side effects, and complications. As defined by the individual RN’s state in which the RN practices. This includes observation of the patient’s response to analgesia by catheter technique, including assessment of pain, side effects, and complications.

Management and Monitoring

1. An RN who has received the proper additional education and training to do so as defined by the RN’s institution/health care facility and state board of nursing may manage the care of patients with catheters or devices for analgesia to alleviate pain. Management may include reinjection of medication (bolus dose) after establishment of an appropriate therapeutic range and adjustment of drug infusion rate in compliance with an LIP’s orders, treatment of side effects and complications, replacement of empty drug reservoirs, refilling implanted drug reservoirs, troubleshooting infusion device, changing infusion device batteries, tubings, and dressings, discontinuing therapy in compliance with an LIP’s orders, and removing catheters (Box 2, Registered Nurse Responsibilities).

2. The institution/health care facility will (Box 3, General Recommendations):
   a. Ensure the implementation of policies, procedures, and guidelines developed with input of anesthesiologists and other physicians as indicated, nurses, pharmacists, risk managers, and other appropriate personnel. These policies, procedures, and guidelines shall outline parameters of the RN’s role in the management and monitoring of analgesia by catheter technique.
   b. Ensure the management and monitoring of analgesia by catheter techniques as defined above (no. 1) are allowed by the individual RN’s state nurse practice laws and policies and are in compliance with established institution/health care facility policies, procedures, and guidelines.

REFERENCE

BOX 3. GENERAL RECOMMENDATIONS

Institution
- Ensure implementation of multidisciplinary policies and procedures related to administration of analgesia by catheter techniques.
- Ensure the registered nurse’s (RN’s) role is consistent with state nurse practice laws and established institutional policies and procedures.
- Ensure licensed independent practitioner (LIP) has access to a formulary containing documented safe drugs for delivery by catheter techniques.
- Provide a means for documentation of all aspects of therapy.
- Provide initial and ongoing RN education related to administration of analgesia by catheter techniques to ensure competency.
- Systematically evaluate safety and effectiveness of the administration of analgesia by catheter techniques.

Licensed Independent Practitioner
- Follow institutional policies and procedures related to administration of analgesia by catheter techniques.
- Place catheter or infusion device, administer test dose, establish analgesic dosage parameters.
- Select and order documented safe drugs for delivery by catheter techniques.
- Communicate with RN regarding patient status.

Registered Nurse
- Complete initial and ongoing institution-established educational requirements related to administration of analgesia by catheter techniques.
- Follow institutional policies and procedures related to administration of analgesia by catheter techniques.
- Communicate with LIP regarding patient status.
- Document therapies according to institutional policies and procedures.
- Participate in quality improvement activities related to administration of analgesia by catheter techniques as required by institution.

BOX 4. RECOMMENDATIONS FOR EDUCATIONAL CONTENT

- Institutional policies and procedures review
- Related anatomy and physiology
- Related pharmacology
- Comprehensive patient assessment
- Use and interpretation of monitoring modalities
- Use and troubleshooting of infusion devices
- Side-effect management
- Complications and emergency situation recognition and management
- Removal of catheters
- Legal ramifications
- Patient/family education

REFERENCE

f. Through its quality improvement program, systematically evaluate the administration of analgesia by catheter techniques and the nurse’s role in monitoring and management of the therapies.

3. The LIP will (Box 3, General Recommendations):
   a. Follow established institution/health care facility policies, procedures, and guidelines for the care of patients receiving analgesia by catheter technique.
   b. Place catheter or infusion device, administer test dose or initial dose of medication to determine correct catheter or infusion device placement, and establish analgesic dosage parameters for patients with pain.
   c. Select and order the appropriate drugs, doses, and concentrations of opioids, local anesthetics, steroids, alpha2-adrenergic agonists, or other documented safe medications or combinations thereof.
   d. Communicate with the RN regarding patient status or changes in status during therapy.
   e. Document therapy in accordance with established institution/health care facility policies, procedures, and guidelines for the care of patients receiving analgesia by catheter technique.

4. The RN will (Box 3, General Recommendations):
   a. Complete educational requirements established by the institution/health care facility before caring for a patient receiving analgesia by catheter technique.
   b. Follow established institution/health care facility policies, procedures, and guidelines for the care of patients receiving analgesia by catheter technique (Box 5, Components of Systematic Assessment).
   c. Communicate with the LIP regarding patient status or changes in status during therapy.
   d. Document therapy in accordance with established institution/health care facility policies, procedures, and guidelines for the care of patients receiving analgesia by catheter technique.
e. Participate in quality improvement activities related to
the provision of analgesia by catheter technique as
required by the institution/health care facility.

Removal of Catheter
When educational criteria have been met and institu-
tional policy and state laws allow, the RN may remove
the catheter that has been used for analgesia on re-
ceipt of an order from an LIP (Box 6, Epidural Catheter
Removal).

SUMMARY
Analgesic administration is within the RN’s scope of
practice and is an essential nursing responsibility. RNs
who have received the proper education and addi-
tional training to do so may manage and monitor any
patient in any setting receiving analgesia by catheter
technique (Box 7, Task Force).

UNCITED REFERENCES
The following references were not cited in text, but
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