

KENTUCKY BOARD OF NURSING  
312 Whittington Parkway, Suite 300  
Louisville, Kentucky 40222-5172  
<http://kbn.ky.gov>

ADVISORY OPINION STATEMENT

**PERIPHERAL INSERTION OF CENTRAL AND MIDLINE INTRAVENOUS CATHETERS BY NURSES**

The Kentucky Board of Nursing is authorized by the *Kentucky Nursing Laws* (Kentucky Revised Statute Chapter 314) to regulate nurses, nursing education and practice, and to issue advisory opinions on the practice of nursing, in order to assure that safe and effective nursing is provided by nurses to the citizens of the Commonwealth.

The Board has received multiple inquiries on the peripheral insertion of central and midline intravenous catheters by registered nurses. After considering the statutes governing nursing practice and the knowledge and skills required to perform the act in a safe, effective manner, the Kentucky Board of Nursing issued the following advisory opinion:

**I. Education, Competence, Accountability and Responsibility of Nurses**

KRS 314.021(2) holds nurses individually responsible and accountable for rendering safe, effective nursing care to clients and for judgments exercised and actions taken in the course of providing care.

KRS 314.021(2) imposes individual responsibility upon nurses. Acts that are within the permissible scope of practice for a given licensure level may be performed only by those licensees who personally possess the education and experience to perform the acts safely and competently.

Nursing practice should be consistent with the *Kentucky Nursing Laws*, established standards of practice, and be evidence based.

**II. Registered Nursing Practice**

It is the opinion of the Board that:

The peripheral insertion of a central<sup>1</sup>, or midline<sup>2</sup> intravenous catheter is within the scope of registered nursing practice for registered nurses who possess substantial specialized knowledge in intravenous therapy practice and who demonstrate competence in the performance of the procedure when:

---

<sup>1</sup>Central catheters are radiopaque catheters, which are inserted in such manner that the distal tip is located in the superior vena cava. Peripherally inserted central catheters are commonly referred to as "PICC lines."

<sup>2</sup>Midline catheters are inserted in the peripheral venous system with the tip located in the proximal portion of the extremity.

- A. Catheter placement is pursuant to a physician/qualified provider's order for the procedure.
- B. In adult patients, the catheter is peripherally inserted via the antecubital site or upper arm and is not advanced into the right atrium. In infants and neonates other veins such as the temporal, external jugular or saphenous vein may be used for placement.
- C. X-ray verification is used to assure proper placement of the catheter when the distal tip is positioned beyond the axillary vein. It is within the scope of registered nursing practice for a registered nurse qualified by specialized education and demonstrated competency to provide a preliminary reading of a chest x-ray for determining placement of the end of the PICC in the vena cava; authorizing the PICC for use; and reordering a chest x-ray, as needed. The nurse's practice should be consistent with the *Kentucky Nursing Laws*, established standards of practice, and be evidence based. This advisory is specific to verifying catheter tip placement for the PICC and does not extend to interpretation of x-rays for other purposes. The radiologist would provide the final read and report.
- D. The procedure is performed according to appropriately established policy and procedure of the health care facility, employing agency and/or physician's office.

In view of the proliferation of various catheter products available for placement, the registered nurse must be knowledgeable about the manufacturer's suggestions and precautions concerning the specific catheter product utilized, and should review product information on a frequent basis.

The use of a stylet/guidewire is not without potential risk<sup>3</sup> to the patient. The decision as to whether or not a stylet/guidewire is used for insertion purposes is based upon the registered nurse's educational and experiential preparation, the registered nurse's competence in the performance of the procedure, the patient's condition, and the policies of the facility in which the procedure is performed. Such policies should establish clinical criteria governing catheter selection and insertion procedures (including use of a stylet/guidewire).

Registered nurses who peripherally insert central or midline intravenous catheters:

- 1. Are responsible for having substantial specialized knowledge and skill in the performance of the procedure;
- 2. Should have documented evidence of educational preparation which provided for clinical practice and demonstrated competence in the performance of the procedure; and
- 3. Are responsible for maintaining competence in the performance of the procedure.

---

<sup>3</sup> Current literature reports a theoretical potential risk associated with the insertion of PICC via stylets/guidewares. Nurses should continue to review applicable research as it becomes available.

### III. Licensed Practical Nursing Practice

It is the opinion of the Board that the peripheral insertion of a central or midline intravenous catheter is not within the scope of licensed practical nursing practice.

The licensed practical nurse should administer medications via PICC as stated in "201 KAR 20:490 Licensed practical nurse intravenous therapy scope of practice."

#### Midclavicular Placement

In February 2005, the Board eliminated reference to "midclavicular" tip placement of PICC because published research reported high complication rates associated with midclavicular tip placement. Nurses should be familiar with current standards of practice and current literature addressing these findings. Information has been published by the Association for Vascular Access (p.k.a. National Association of Vascular Access Networks - NAVAN) in an article entitled, "Tip Location of Peripherally Inserted Central Catheters," JOURNAL OF VASCULAR ACCESS DEVICES," Summer 1998.

#### Determining Scope of Practice

KRS 314.021(2) holds all nurses individually responsible and accountable for the individual's acts based upon the nurse's education and experience. Each nurse must exercise professional and prudent judgment in determining whether the performance of a given act is within the scope of practice for which the nurse is both licensed and clinically competent to perform. In addition to this advisory opinion statement, the Kentucky Board of Nursing has published "Scope of Practice Determination Guidelines" which contains a decision tree chart providing guidance to nurses in determining whether a selected act is within an individual nurse's scope of practice now or in the future. A copy of the guidelines may be downloaded from the Kentucky Board of Nursing website at <http://kbn.ky.gov>

The Kentucky Board of Nursing issues advisory opinions as to what constitutes safe nursing practice. As such, an opinion is not a regulation of the Board and does not have the force and effect of law. It is issued as a guideline to licensees who wish to engage in safe nursing practice.

#### Applicable Statutes from the *Kentucky Nursing Laws* - KRS CHAPTER 314<sup>4</sup>

KRS 314.021(2) states:

All individuals licensed under provisions of this chapter shall be responsible and accountable for making decisions that are based upon the individuals' educational preparation and experience in nursing.

KRS 314.011(6) defines "registered nursing practice" as:

...The performance of acts requiring substantial specialized knowledge, judgment, and nursing skill based upon the principles of psychological, biological, physical, and social sciences in the application of the nursing process in:

---

<sup>4</sup> A copy of the *Kentucky Nursing Laws* may be purchased from the Kentucky Board of Nursing office.

- a) The care, counsel, and health teaching of the ill, injured or infirm.
- b) The maintenance of health or prevention of illness of others.
- c) The administration of medication and treatment as prescribed by a physician, physician assistant, dentist, or advanced practice registered nurse and as further authorized or limited by the board, and which are consistent either with American Nurses' Association Standards of Practice or with Standards of Practice established by nationally accepted organizations of registered nurses. Components of medication administration include, but are not limited to:
  - 1. Preparing and giving medication in the prescribed dosage, route, and frequency, including dispensing medications only as defined in subsection (17)(b) of this section;
  - 2. Observing, recording, and reporting desired effects, untoward reactions, and side effects of drug therapy;
  - 3. Intervening when emergency care is required as a result of drug therapy;
  - 4. Recognizing accepted prescribing limits and reporting deviations to the prescribing individual;
  - 5. Recognizing drug incompatibilities and reporting interactions or potential interactions to the prescribing individual; and
  - 6. Instructing an individual regarding medications.
- d) The supervision, teaching of, and delegation to other personnel in the performance of activities relating to nursing care.
- e) The performance of other nursing acts which are authorized or limited by the board, and which are consistent either with American Nurses' Association Standards of Practice or with Standards of Practice established by nationally accepted organizations of registered nurses.

KRS 314.011(10) defines "licensed practical nursing practice" as:

...The performance of acts requiring knowledge and skill such as are taught or acquired in approved schools for practical nursing in:

- a) The observing and caring for the ill, injured, or infirm under the direction of a registered nurse, a licensed physician, or dentist.
- b) The giving of counsel and applying procedures to safeguard life and health, as defined and authorized by the board.
- c) The administration of medication or treatment as authorized by a physician, physician assistant, dentist, or advanced practice registered nurse and as further authorized or limited by the board which is consistent with the National Federation of Licensed Practical Nurses or with Standards of Practice established by nationally accepted organizations of licensed practical nurses.
- d) Teaching, supervising, and delegating except as limited by the board.
- e) The performance of other nursing acts which are authorized or limited by the board and which are consistent with the National Federation of Licensed Practical Nurses' Standards of Practice or with Standards of Practice established by nationally accepted organizations of licensed practical nurses.

KRS 314.091(1)(c) and (d) states:

The board shall have power to deny, limit, revoke, probate or suspend any license to practice nursing issued by the board or applied for in accordance with this chapter, or to otherwise discipline a licensee, or to deny admission to the licensure examination, or to require evidence of evaluation and therapy upon proof that the person: ... Has negligently or willfully acted in a manner inconsistent with the practice of nursing; Is unfit or incompetent to practice nursing by reason of negligence or other causes including but not limited to being unable to practice nursing with reasonable skill or safety; ...

Approved: 1/91  
Revised 7/97; 4/01; 6/04; 2/05  
Editorial Revision: 1/2011  
Reviewed: 5/2011