



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

ADVISORY OPINION STATEMENT

**ROLES OF NURSES IN THE ADMINISTRATION OF
MEDICATION VIA VARIOUS ROUTES**

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

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.

Opinion: Roles of Nurses in the Administration of Medication Via Various Routes

Approved Date: 6/1987

Revised: 12/1987; 12/1989; 2/1991; 2/1992; 1/1993; 12/1993, 10/1999; 4/2001; 2/2005; 6/2005; 4/2007; 10/2014; 2/2019; 10/2022

Editorial Revision: 1/2011; 5/2012; 5/2018; 2/2023

Accountability and Responsibility of Nurses

In accordance with KRS 314.021(2), nurses are responsible and accountable for making decisions that are based upon the individuals' educational preparation and current clinical competence in nursing, and requires licensees to practice nursing with reasonable skill and safety. Nursing practice should be consistent with the *Kentucky Nursing Laws*, established standards of practice, and be evidence based.

Rationale for Advisory Opinion

The Kentucky Board of Nursing has issued an administrative regulation entitled, "201 KAR 20:490 Licensed practical nurse infusion therapy scope of practice" (effective November 2, 2018), and advisory opinion statement entitled, "Roles of Nurses in the Administration of Medication per Intraspinal Routes" (AOS #04). In response to multiple inquiries regarding the roles of nurses in the administration of medication per various routes, including via topical, iontophoresis, intradermal, intra-arterial, intracavitary, and intrapleural routes, the Board of Nursing has issued opinions as contained herein.

Nursing Interventions Identified in this Advisory Opinion Statement include:

- **Roles of Nurses in Medication Administration:**
 - Dynamic Endocrine Testing
 - Local Anesthesia in Dental Setting
 - Medication Administration Category I,II,& III Guidelines
 - Peripheral Nerve Block
 - Radiopharmaceuticals
 - Recommendation of Over-the-Counter (OTC) Medications

Nurses are responsible and accountable for their decisions regarding the administration of medication, and any other nursing act that they perform, based upon their educational preparation and experience in nursing. Thus, 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 those acts in a safe and competent manner.

It is the responsibility of the nurse to maintain documented evidence of educational preparation and demonstrated competency in the administration of medication per various routes.

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

Advisory Opinion: LPN Scope of Practice in the Performance of Dynamic Endocrine Testing

“Dynamic Endocrine Testing” refers to the practice of introducing a provocative or suppressive agent or situation and monitoring the hormonal response.

Nursing Practice

It is within the scope of licensed practical nursing practice for an LPN, who is educationally prepared and currently clinically competent, to perform dynamic endocrine testing under the onsite supervision of a qualified healthcare provider,* or registered nurse in accordance with 201 KAR 20:490 “Licensed practical nurse intravenous therapy scope of practice”.

The Board recommends that:

There should be documented evidence of the LPN’s educational preparation and current clinical competence. The LPN would be expected to follow written policy and procedures and evidence-based protocols agreed upon by the medical and nursing staff and formally adopted by the facility or organization.

Advisory Opinion: Scope of Practice of Nurses in the Administration of Local Anesthesia to Dental Patients

“Local Anesthesia” refers to the administration of medication topically or injected to numb an area.

Nursing Practice

The administration of local anesthesia to dental patients is within the scope of registered nursing practice, with an order from a qualified healthcare provider, for the nurse who possesses the requisite educational preparation and current clinical competency to perform the act in a safe effective manner. The nurse’s practice should be consistent with the *Kentucky Nursing Laws* and established standards of practice, and be evidence based.

It is the advisory opinion of the Board that the administration of local anesthesia to dental patients is **not** within the scope of the licensed practical nurse.

*Qualified Health Care Provider means “a physician, physician assistant, dentist, or advanced practice registered nurses,” KRS 314.011 (6)(c).

Advisory Opinion: Medication Administration via topical, iontophoresis, intradermal, intra-arterial, intracavitary, and intrapleural

The practice of the licensed practical nurse and the registered nurse, with an order from a qualified healthcare provider, standing orders, or protocols, should be guided by the categories as follows:

Category I. It is within the scope of **licensed practical nursing practice**, for the nurse who is educationally and experientially prepared, either through a practical nursing or continuing education program, to administer prescribed medication per oral, topical¹, intradermal, subcutaneous, and intramuscular routes, and via gastric tubes and urinary bladder catheters, under the direction² of a registered nurse, physician, or dentist. (For administration of intravenous medication by LPNs see 201 KAR 20:490 Licensed practical nurse infusion therapy scope of practice.) The licensed practical nurse may assist in the maintenance of medication administration for a peripheral nerve block as stated in Category II below.

Category II. It is within the scope of **registered nursing practice**, for the registered nurse who is educationally prepared and clinically competent, to administer prescribed medication per routes identified in Category I, and to administer medications, except as limited³, via intravenous, intra-arterial, intraperitoneal, intravesical, intrapleural and endotracheal routes, and via an implanted infusion pump.

In order to ensure patient safety, the registered nurse who administers medications per various routes described in Category II should:

1. Possess in-depth specialized knowledge, judgment, and nursing skill in the performance of the given act and in monitoring the effects of the drug therapy;
2. Be knowledgeable of the patient's plan of care, and perform the act as a part of the established plan of care;
3. Be knowledgeable of the potential complications and adverse reactions which may result from the act; and
4. Possess the knowledge and skill to recognize adverse reactions and to take appropriate action.

Medication Administration via Peripheral Nerve Block

After review of the American Society of Anesthesiologists "Statement on the Role of Registered Nurses in the Management of Continuous Regional Analgesia" (2018)⁴ and the American Association of Nurse Anesthetists "Care of Patients Receiving Analgesia by Catheter Techniques", Position Statement and Policy Considerations" (2017)⁵ it is the Board's opinion that:

- 1) Administer a long-acting local anesthetic agent injected through a catheter placed near a peripheral nerve for the purpose of acute and chronic pain management. It is within the scope of registered nursing practice in care settings including but not limited to hospitals, hospices, long-term care facilities, and patient homes;
- 2) Initiate, adjust, and discontinue catheter infusions;
- 3) Administer analgesic boluses through the catheter as prescribed by a physician or APRN,

¹Topical - the application of medication to skin or mucous membranes, including instillation into the eyes, nose, and ears, insertion under the tongue (sublingual), insertion into the cheek (buccal), vagina or rectum, and via iontophoresis.

²Direction - as defined by the Kentucky Board of Nursing means communication of a plan of care, which is based upon an assessment of the patient by the registered nurse, physician or dentist that establishes the parameters for the provision of care or for the performance of an act. The registered nurse, APRN, physician, or dentist is available to assess and evaluate patient response(s).

³Except as limited - the administration of medications for the purpose of general anesthesia is within the scope of practice of the advanced practice registered nurse, designated nurse anesthetist and not within the scope of registered nursing practice

⁴ Statement on the Role of Registered Nurses in the Management of Continuous Regional Analgesia (2018) American Society of Anesthesiologists <https://www.asahq.org/standards-and-guidelines/statement-on-the-role-of-registered-nurses-in-the-management-of-continuous-regional-analgesia>

⁵ "Care of Patients Receiving Analgesia by Catheter Techniques, Position Statement and Policy Considerations" (2017) [https://www.aana.com/docs/default-source/practice-aana-com-web-documents-\(all\)/professional-practice-manual/care-of-patients-receiving-analgesia-by-catheter-techniques.pdf?sfvrsn=d30049b1_6](https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/professional-practice-manual/care-of-patients-receiving-analgesia-by-catheter-techniques.pdf?sfvrsn=d30049b1_6)

- 4) Replace empty medication syringes and bags with new pre-filled syringes and bags using proper aseptic technique;
- 5) Monitor the catheter insertion site;
- 6) Remove the catheter;
- 7) Monitor the patient for analgesic efficacy and side effects; and
- 8) Treat analgesic-related side effects.

Registered nurses should perform this procedure as ordered by and under the direction of a physician or APRN based upon the following:

- 1) Documentation (by the provider placing the catheter) of uncomplicated catheter insertion, and of the specific nerve(s) blocked by the administration of the medication; and
- 2) Documentation that no complications, which are catheter-related, have occurred since the insertion of the catheter. The insertion, advancement, or repositioning of the catheter is **not** within the scope of registered nursing practice; but is within the scope of practice of the advanced practice registered nurse, designated nurse anesthetist.

A. The responsibilities for assessment and evaluation of patients receiving a continuous infusion of medication for maintenance of a peripheral nerve block is within the scope of registered nursing practice. It is within the scope of licensed practical nursing practice for the licensed practical nurse to assist in the collection of data for assessment and evaluation purposes.

B. It is within the scope of registered nursing practice for the registered nurse, based upon a medical order, to change the infusion pump settings; it is **not** within the scope of licensed practical nursing practice to change the infusion pump settings.

C. It is within the scope of licensed practical nursing practice for the licensed practical nurse to participate in the maintenance of medication administration for a peripheral nerve block, by changing the infusion unit (pre-mixed, pre-labeled bag or syringe) on a peripheral nerve block infusion pump under the supervision of a registered nurse.

Category III. As stated in Section 314.011(6)(c) and (10)(c), the administration of medication is the practice of nursing. The administration of medication to patients in health care facilities is both the responsibility of nurses and an integral part of the nursing care rendered to patients. Medication may also be administered to patients in health care facilities by physicians or other health care professionals who have statutory authority to administer medications. In Kentucky, **unlicensed personnel known as medication aides, certified medicine technicians, or similar titles**, may function by administering oral and topical medication in long-term care facilities only through delegation by and under the supervision of a registered nurse or licensed practical nurse. Unlicensed personnel who function as a medication aide must have successfully completed a state approved training program from a state approved training provider for administration of medications as defined in 902 KAR 20:048 issued by the Cabinet for Health and Family Services, Office of the Inspector General, Frankfort, Kentucky.

See the following regulations related to medication aides:

- 902 KAR 20:051 Operation & Services Intermediate Care - Section 4.(4)(e)2.
- 902 KAR 20:086 Operation & Services ICF MR/DD Section 4.(6)(e)2.
- 902 KAR 20:291 Alzheimer's nursing homes - Section 4.(2) (a) & (6)(f)2.

Advisory Opinion: Scope of Practice for Registered Nurse in the Administration of Radiopharmaceuticals

Radiopharmaceuticals (also known as radioactive drugs) are drugs that contain radionuclides that emit radiation. They may be administered via oral, injection, placed into the eye, or into the bladder.

Nursing Practice

The patient education, handling, preparation, and administration by various routes (intravenous, inhalation, oral, intracavity, intrathecal, subcutaneous, and intradermal) of radiopharmaceuticals is within the scope of registered nursing practice for the registered nurse, with an order from a qualified healthcare provider, standing orders, or protocols, who is educationally prepared and currently clinically competent. The registered nurse shall have documented evidence of completion of continuing education, which provides for clinical practice and demonstration of competency in the performance of such procedure.

The registered nurse is responsible to maintain documentation of educational preparation and for maintaining current clinical competence.

The Board recommends that:

The registered nurse would need to be aware of his/her own safety as well as that of the patient by applying knowledge of time, distance, and shielding in administering the radiopharmaceuticals.

Advisory Opinion: Scope of Nursing Practice in the Recommendation and Administration of Over-the-Counter (OTC) Medications

Over-the-counter medicine (OTC) or nonprescription medicine refers to medicine that you can buy without a prescription.

Nursing Practice

When a nurse, as an employee or volunteer of a health care delivery system, provides non-prescription medication to an individual, the nurse should do so based on an order from a qualified healthcare provider or medically approved guidelines to supply the non-prescription medication.

The Board recommends that:

An educationally prepared and clinically competent nurse, as an individual who is acting outside a health delivery system, may choose to recommend or administer a non-prescription drug (in a pre-labeled, pre-packaged form) to a person whose condition warrants it based on nursing assessment.

Additional Information

Nurses who make delegatory decisions regarding the performance of acts/tasks by others are governed by 201 KAR 20:400 Delegation of nursing tasks.

For information on the delegation of specific medication administration acts to unlicensed personnel, see Advisory Opinion Statement #15 entitled "Roles of Nurses in the Supervision and Delegation of Nursing Acts to Unlicensed Personnel."

Dialysis Technicians may administer only those medications stated in Section 1 of 201 KAR 20:478 Dialysis technician scope of practice, discipline, and miscellaneous requirements.

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 issued Advisory Opinion Statement #41 RN/LPN Scope of Practice Determination Guidelines which contains the KBN Decision-Making Model 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 KBN Decision-Making Model for Determining Scope of Practice for RNs/LPNs may be downloaded from the Board's website <https://kbn.ky.gov/General/Documents/aos41-rn-lpn-scope-of-practice-determination-guidelines.pdf> and a copy of the APRN guidelines may be downloaded from the Board's website <https://kbn.ky.gov/General/Documents/aprn-scope-of-practice-decision-making-model.pdf>

The following grid provides a list of procedures outlined in the AOS. An “X” indicates that such is within the scope of practice of the nurse who is educationally prepared and clinically competent to provide care as described above.

Medication Administration Route	LPN	RN	APRN
	Requires Qualified Healthcare Provider* Order, and Prescription. Must Be Performed Under the Direction of a Qualified Healthcare Provider	Requires Qualified Healthcare Provider* Order and Prescription	APRNs Certified in the Relevant Role and Population Foci
Dynamic Endocrine Testing	X	X	X
Local Anesthesia in Dental Setting		X	X
Radiopharmaceuticals		X	X
Category I Routes			
Oral, Topical, Intradermal, Subcutaneous, Intramuscular, Gastric Tube, and Urinary Bladder Catheter Routes	X	X	X
Category II Routes			
Intravenous Administration	LPN see 201 KAR 20:490	X	X
Intraarterial, Intravesical, Intraperitoneal, Intrapleural, and Endotracheal Routes		X	X
Implanted Infusion Pump		X	X
Peripheral Nerve Block			
Participation in Maintenance of Medication Administered via Nerve Block	X	X	X
Initiate Administration of, Adjust, and Discontinue Catheter Infusion		X	X
Category III			
Delegation and Supervision of Administration of Medication via Oral and Topical Routes to Patients in Long-Term Care Facilities to Unlicensed Personnel (ie Medication Aides, Certified Medicine Technicians) See 201 KAR 20:400, 902 KAR 20:048, 902 KAR 20:051, 902 KAR 20:086, and 902 KAR 20:291.	X	X	X

Please Note: Nurse must be educationally prepared and clinically competent to perform any of the tasks/procedures listed above and follow the policies of their facility or organization.

*Qualified Healthcare Providers include MD, PA, APRN, and/or Dentist KRS 314.011 (6) and (10)

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Applicable Statutes From the *Kentucky Nursing Laws*⁶

KRS 314.021(2) states that:

All individuals licensed or privileged 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 and shall practice nursing with reasonable skill and safety.

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, advanced practice registered nurse, physician assistant, 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; and
- 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 314.011(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:

- 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 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 Scope and 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;

⁶ A copy of the *Kentucky Nursing Laws* may be downloaded from the Kentucky Board of Nursing website at <http://kbn.ky.gov>.

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, and
- 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(8) defines "advanced practice registered nursing practice" as:

... The performance of additional acts by registered nurses who have gained advanced clinical knowledge and skills through an accredited education program that prepares the registered nurse for one (1) of the four (4) APRN roles; who are certified by the American Nurses' Association or other nationally established organizations or agencies recognized by the board to certify registered nurses for advanced practice registered nursing practice as a certified nurse practitioner, certified nurse anesthetist, certified nurse midwife, or clinical nurse specialist; and who certified in at least one (1) population focus. The additional acts shall, subject to approval of the board, include but not be limited to prescribing treatment, drugs, devices, and ordering diagnostic tests. Advanced practice registered nurses who engage in these additional acts shall be authorized to issue prescriptions for and dispense nonscheduled legend drugs as defined in KRS 217.905 and to issue prescriptions for but not to dispense Schedules II through V controlled substances described in or as classified pursuant to KRS 218A.020; 218A.060, 218A.080, 218A.100, and 218A.120, under the conditions set forth in KRS 314.042 and regulations promulgated by the Kentucky Board of Nursing on or before August 15, 2006. The performance of these additional acts shall be consistent with the certifying organization or agencies' scopes and standards of practice recognized by the board by administrative regulation.

NOTE: Also see: KENTUCKY ADMINISTRATIVE REGULATION 201 KAR 20:490 LICENSED PRACTICAL NURSE INFUSION THERAPY SCOPE OF PRACTICE, AND (AOS) #04 "ROLES OF NURSES IN THE ADMINISTRATION OF MEDICATION PER INTRASPINAL ROUTES."