



**KENTUCKY BOARD OF NURSING**  
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**ADVISORY OPINION STATEMENT**

**ROLES OF NURSES IN BLOOD RELATED PROCEDURES**

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, and to facilitate the delivery of safe, effective nursing care to the public.

**Opinion:** Roles of Nurses in Blood Related Procedures

**Approved Date:** 01/1991

**Revised:** 07/1997; 04/2001; 06/2004;  
02/2005; 10/2014; 12/2014;  
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**Reviewed:** 05/2011

**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 Opinions**

The growth in the field of blood-related procedures such as those noted in the fields of hematology, oncology, and regenerative medicine have resulted in the opportunity for the educationally prepared and clinically competent registered nurse to realize an expansion in practice in these areas. The Board has received multiple inquiries related to the nurse's scope of practice regarding blood-related procedures and has issued the following advisory opinion statements.

**Nursing Interventions identified in this Advisory Opinion Statement include:**

- **The Role of Nurses in the performance of:**
  - Stem Cell Therapy - Embryonic
  - Platelet Rich Plasma (PRP) Therapy
  - Therapeutic Phlebotomy
  - Bone Marrow Aspiration and Biopsy

**Educational Preparation and Clinical Competency**

Pursuant to KRS 314.021(2) all nurses are held responsible and accountable for making decisions that are based upon the individual's educational preparation and current clinical competence. One method for demonstrating educational preparation and clinical competence is through obtaining relevant certifications within a specialty area. Another method would be to create a portfolio of trainings, workshops, and continuing education that demonstrates the acquisition of additional knowledge and clinical competency in the specialty area.

**Advisory Opinion: Platelet Rich Plasma (PRP) Therapy and Stem Cell Therapy-Embryonic**

**Regenerative Medicine:**

Typically, when the term 'Regenerative Medicine' arises people automatically think about stem cells, particularly, embryonic stem cells. Regenerative medicine has the potential to heal or replace tissues and organs damaged by age, disease, or trauma. Regenerative therapy is a boarder term that entails stem cell treatments, cartilage regeneration, platelet-rich plasma (PRP), and prolotherapy.

**Platelet Rich Plasma (PRP):**

Platelet Rich Plasma is widely used in joints for osteoarthritis. PRP is based on the hypothesis that platelets and plasma found in the blood can heal and repair injuries. To make PRP, blood is drawn from the patient and processed to create a concentrated solution that contains more platelets and plasma than blood. A centrifuge is often used to create this solution. PRP is injected into the injured tendon or applied surgery. PRP injections are used in injured tendons, ligaments, muscles, and joints. PRP has also been used in aesthetic therapy for treatment of alopecia.

**Stem Cell Therapy-Embryonic:**

Cell-based therapy as a modality of regenerative medicine is rapidly becoming the newest treatment with the aim of repairing and possibly replacing diseased cells, tissues or organs and eventually retrieving normal function. The prospect of regenerative medicine as an alternative to conventional drug-based therapies is becoming a tangible reality by the vigorous commitment of the research studies across a wide range of diseases. However, despite the increased number of publications reporting successful cases of stem cell-based therapies, a major number of clinical trials have not yet acquired full regulatory approvals for validation as stem cell therapies. To date, the most established stem cell treatment is bone marrow transplants to treat blood and immune system disorders.

Embryonic stem cells. These stem cells come from embryos that are three to five days old. At this stage, an embryo is called a blastocyst and has about 150 cells. Embryonic stem cells (ESCs) are pluripotent cells. Stem cell transplants, also known as bone marrow transplants, replace cells damaged by chemotherapy or disease or serve as a way for the donor's immune system to fight some types of cancer and blood-related diseases, such as leukemia, lymphoma, neuroblastoma, and multiple myeloma. These transplants use adult stem cells or umbilical cord blood.

**APRN Nursing Practice**

The Board determined that it is within the scope of practice of an advanced practice registered nurse (APRN), who is educationally prepared and clinically competent, to evaluate, treat, prescribe, and administer *platelet-rich plasma* (PRP) therapy.

It is within the scope of practice of an advanced practice registered nurse (APRN), who is educationally prepared and clinically competent, to evaluate, treat, prescribe, and administer stem cell therapy derived from embryonic stem cells and umbilical cord blood.

**Advisory Opinion: Therapeutic Phlebotomy**

Therapeutic phlebotomy (TP) refers to blood removal as a treatment for disorders involving red blood cells and/or serum iron, which requires an order from a qualified healthcare provider.

**Registered Nursing Practice**

The performance of therapeutic phlebotomy (removal of a large volume of blood via a central venous access device), is within the scope of the registered nursing practice for the nurse who is educationally prepared and clinically competent in the performance of the procedure.

**The Board recommends that:**

The performance of therapeutic phlebotomy should be in accordance with documented facility policy and procedure as well as current evidence-based practice.

**Advisory Opinion: Bone Marrow Aspiration and Biopsy**

Bone marrow aspiration and bone marrow biopsy are procedures to collect and examine bone marrow; the spongy tissue inside some of your larger bones. Bone marrow aspiration and biopsies are often performed both in the inpatient and outpatient settings for the diagnosis of a multitude of hematologic disorders. Both the palpation-guided and computed-tomography-guided approaches are common methods for performing this procedure and have high diagnostic accuracy as well as low complication rates.

**The Board recommends that:**

The Performance of Bone Marrow Aspiration and Biopsy is within the scope of practice of an APRN who is educationally prepared and clinically competent to perform bone marrow aspiration and biopsy. It is not within the scope of a registered nurse to perform such acts.

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.

Procedures	LPN	RN	APRN
	These tasks are not within the scope of practice of the LPN.	Requires Qualified Healthcare Provider* Order	APRNs Certified in the Relevant Role and Population Foci
<b>Platelett Rich Plasma (PRP) Evaluate, Treat, Prescribe, and Administer</b>			X
<b>Stem Cell Therapy-Embryonic</b>			X
<b>Therapeutic Phlebotomy</b>		X	X
<b>Bone Marrow Aspiration and Biopsy</b>			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)

**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 issued Advisory Opinion Statement #41 RN/LPN Scope of Practice Determination Guidelines which contains the KBN Decision-Making Model for Determining Scope of Practice for RNs/LPNs and published the APRN Scope of Practice 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.

Copies of Advisory Opinion Statement #41 RN/LPN Scope of Practice Determination Guidelines and the APRN Scope of Practice Decision Making Model may be downloaded from the Board's website <http://kbn.ky.gov>.

**Applicable Statutes from the Kentucky Nursing Laws**

KRS 314.021(2) states:

All individuals licensed or privileged under provisions of this chapter shall be responsible and accountable for making decisions that are based upon the individual's educational preparation and experience in nursing and shall practice nursing with reasonable skill and safety.

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 as a certified nurse practitioner, certified registered 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 as classified in 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.

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 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 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;
  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.