

STATE OF FLORIDA  
BOARD OF NURSING

IN RE: THE PETITION  
FOR DECLARATORY  
STATEMENT OF  
LADENA RHODEN, RN, CRNI

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**FINAL ORDER**

THIS CAUSE came before the BOARD OF NURSING (hereinafter Board) pursuant to §120.565, Florida Statutes, and Rule 28-105, Florida Administrative Code, at a duly-noticed meeting in Ft. Lauderdale, Florida on April 7, 2006, for the purpose of considering the Petition for Declaratory Statement (attached as Exhibit A) filed by LADENA RHODEN, RN, CRNI (hereinafter Petitioner). Having considered the petition, the arguments submitted by counsel for Petitioner, and being otherwise fully advised in the premises, the Board makes the following findings and conclusions.

**FINDINGS OF FACT**

1. This petition was noticed by the Board in Vol. 32, No. 6, dated February 10, 2006 of the Florida Administrative Weekly at page 646.
2. Petitioner, LADENA RHODEN, RN, CRNI, is registered nurse licensed to practice nursing in the State of Florida, having license number RN 1754132.

**CONCLUSIONS OF LAW**

1. The Board has jurisdiction over this matter pursuant to Section 120.565, Florida Statutes, and Rule 28-105, Florida Administrative Code.
2. The petition filed in this cause is not in substantial compliance with the provisions of Section 120.565, Florida Statutes, and Rule 28-105, Florida Administrative Code.

3. The petition does not state with particularity Petitioner's set of circumstances. Instead, the petition requests guidance with regard to the practice of other nurses, and requests the Board to "allow an expansion" of the practice of registered nurses. The purpose of a declaratory statement is to give guidance to a petitioner regarding how a statutory provision, rule or order applies to the petitioner's stated circumstances.

WHEREFORE the Petition for Declaratory Statement is dismissed.

DONE AND ORDERED this 10<sup>th</sup> day of May, 2006.

**BOARD OF NURSING**



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Joe R. Baker, Jr.,  
Acting Executive Director  
for Patricia Dittman, RN, Chair

**NOTICE OF APPEAL RIGHTS**

Pursuant to Section 120.569, Florida Statutes, the parties are hereby notified that they may appeal this Final Order by filing one copy of a notice of appeal with the clerk of the department and by filing a filing fee and one copy of a notice of appeal with the District Court of Appeal within thirty days of the date this Final Order is filed.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Final Order has been furnished by U.S. Mail to Petitioner LADENA RHODEN, RN, CRNI, Charlotte Regional Medical Center, 809 East Marion Avenue, Punta Gorda FL 33952 and by interoffice mail to John Garrison, Department of Legal Affairs, PL-01 The Capitol, Tallahassee FL 32399-1050, this 22<sup>nd</sup> day of June, 2006.

  
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Deputy Agency Clerk

**Petition for Declaratory Statement Before the Florida Board of Nursing**

Petitioner:  
Ladena Rhoden RN CRNI  
Charlotte Regional Medical Center  
809 East Marion Avenue  
Punta Gorda FL 33952  
941-637-2506  
941-637-2559 fax

**FILED**  
DEPARTMENT OF HEALTH  
DEPUTY CLERK  
CLERK *Heather Coleman*  
DATE 1-11-06

R.E. 464.003 (3) (a) of Chapter 64B9 Florida Administrative Code

"Practice of professional nursing" means the performance of those acts requiring substantial specialized knowledge, judgment, and nursing skill based upon applied principles of psychological, biological, physical, and social sciences which shall include, but not be limited to:

1. The observation, assessment, nursing diagnosis, planning, intervention, and evaluation of care; health teaching and counseling of the ill, injured, or infirm; and the promotion of wellness, maintenance of health, and prevention of illness of others.
2. The administration of medications and treatments as prescribed or authorized by a duly licensed practitioner authorized by the laws of this state to prescribe such medications and treatments.
3. The supervision and teaching of other personnel in the theory and performance of any of the above acts.

A declaratory statement is being requested to provide guidance for registered nurses who place PICC lines in Florida and wish to expand their practice to include the verification of catheter tip placement after PICC line insertion.

*Is it proper to interpret the above rule as allowing such an expansion if the nurse obtains the 'specialized knowledge' needed to assess for PICC tip placement on x-ray and competency, or 'judgment and skill' is verified?*

Effect of decision

We currently have restricted hours of service, delays in initiation of treatment, and patient dissatisfaction with lengthy wait times due to our total reliance on the radiologist. A decision by the FBON to allow an expansion of our practice to include tip assessment (assuming performance and documentation of the education, training, and competency pieces) would lift restrictions on our availability to patients who need our services, allow more timely initiation of therapies, and increase patient satisfaction. Strict adherence to the educational and competency expectations will maintain patient safety and improve outcomes.

*Ladena Rhoden RN CRNI*

December 21, 2005



JAN 10 2006

Board of Nursing



Charlotte Regional  
Medical Center

Florida Board of Nursing  
Florida Department of Health, Division of Medical Quality Assurance  
4052 Bald Cypress Way, Bin #CO2  
Tallahassee FL 32399-3250

December 29, 2005

Dear Board Members:

I am writing to request a declaratory statement regarding the appropriateness of registered nurses who are trained to insert PICC lines performing radiological tip assessment after the procedure so that the line can be released for use more quickly. The nurse's scope of practice would be limited to verifying catheter tip placement, with the official 'reading' of the x-ray film being done by a radiologist within 24 hours.

I am attaching the proposal I have prepared for presentation to our hospital committees, outlining the reasons we wish to pursue this project, the internal and external support we have to assist us, the educational and competency validation plan, and performance improvement tools we propose to use to ensure the safety and efficacy of the program. A policy draft detailing the exact procedure to follow and performance expectations for the nurse is also included.

Our goal is to advance our infusion therapy practice and improve patient satisfaction and care, while ensuring their safety. A statement from the Board of Nursing indicating that following our proposed plan will be acceptable would give guidance to qualified infusion therapy nurses and employing institutions in the state of Florida.

I appreciate your consideration in this matter.

Sincerely,

Ladena Rhoden RN CRNI  
Regional IV Therapy Coordinator  
Charlotte Regional Medical Center  
941-637-2506  
Peace River Regional Medical Center  
941-766-4155  
941-505-4988 (pager)

# **Radiological Assessment of Tip Placement in PICC Lines**

**A proposal for advancing the practice of infusion therapy nurses at  
Charlotte Regional Medical Center and improving patient care.**

**August 19, 2005**

## Introduction

Radiology departments are busy areas, with multiple types of studies being done throughout the day. PICC line readings are not considered a priority in the overall scheme of things, often resulting in tardy readings, which leads to delayed patient treatments, interrupted work flows, and patient and nurse dissatisfaction. Such issues have led to establishing programs to train PICC nurses in radiological assessment of tip placement post PICC insertion.

PICC nurses are embracing this expansion of their practice with the goal of improving patient outcomes and satisfaction. Infusion nurses in 15 states report the practice and more are developing plans to initiate such programs. The IV Therapy Department at Charlotte Regional Medical Center (CRMC) has been monitoring this movement for some time now and believes that, with the support and backing of the radiologists here, it is the appropriate time to proceed with this project.

## Background

I originally began looking into the possibility of establishing such a program in June of 2004 by contacting a network of professionals within the infusion therapy community. I was referred to existing programs at MD Anderson and Houston Northwest Medical Center in Texas, Oregon Health Sciences Medical Center, Wake Medical Center (NC), and the VA Puget Sound Healthcare System in Washington State. Basic steps to founding such programs were recommended:

- To determine acceptance of the proposed act by the state board of nursing. (Is a particular practice expressly permitted or forbidden?)
- To determine if the proposed act is consistent with standards as set by national nursing organizations, literature and research, etc.
- To determine if the proposed act is considered 'standard of care' within a community. (This community can be a group of nursing professionals as well as a demographic one.)
- To evaluate the level of knowledge and experience within a specific group of nurses and their willingness to assume responsibility for the proposed act.
- To determine support for the proposed act by the institution's administration, nursing practice committee, medical staff.
- To determine the degree of commitment that the radiology department is willing to devote to the proposed act.

Clearly, if support and commitment is lacking at any of these junctures, a successful program cannot be established. In mid 2004, a few essential components were missing, so the project was not pursued.

More than a year later, I am revisiting this concept due to an identified need to improve patient care and workflow. I have found that several factors now exist that should actually lend support to pursuing this project:

- Brief communications with members of the Florida Board of Nursing indicate that such a program, if well executed, would be acceptable<sup>1</sup>

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<sup>1</sup> Emory, Rosemary, FBON, March 2004 (email correspondence); Coble, Dan, FBON, July 2005 (CRMC Informational Session)

- 15 states now have infusion nurses who assess tip placement and release the PICC line for use<sup>2</sup>
- The Infusion Nurses Society (INS) and the Association for Vascular Access (AVA) have published articles and sponsored sessions on this subject, thereby helping to establish credence
- The experience level and confidence of nurses in the IV Therapy Department at CRMC has increased and they express a desire to proceed
- The equipment changes in the radiology department have stabilized.

## Plan

The basic premise of this proposal is that the nurses who place PICC lines will be trained to assess and validate proper tip placement of the catheters they insert. Radiologists will be responsible for doing a definitive 'reading' of the x-ray film within 24 hours. If the catheter tip cannot be clearly identified at any time, the PICC nurse will consult the radiologist on duty for further instructions. Policy and procedure will outline the protocol to be followed (draft attached).

### Phase I

I will present this proposal to the administrative committees from which we will need support to proceed with this project: Nurse Practice, Safety Committee, Medical and Surgical Committees, Radiology Committee, and Medical Executive Committee. Policy and procedure, documentation tools, and performance improvement monitors will be included. If the committees decide that this proposal meets with their approval, we will move to phase II.

*Note: The Medical Care Committee, while in favor of the proposal, advise obtaining a declaratory statement from the Board of Nursing prior to proceeding.*

### Phase II

Dr. Righi has generously offered to assist us with this project. I will work with him to determine the educational and clinical competency criteria to be met. Classes will be arranged and initial clinical competencies conducted by the radiologists in the Medical Imaging Department.

### Phase III

PICC trained nurses who will be participating in the project will be identified and assigned to classes given by Dr. Righi and his partners. Documentation will be carefully maintained to validate both education and clinical competency.

### Phase IV

After the initial educational and clinical requirements are met, performance improvement monitors will be conducted to ensure patient safety and continued clinical competency for the PICC nurses. Statistics on the accuracy of the nurses' tip assessment readings shall be reported to appropriate committees and kept in individual employee files as validation of competency or identification of those needing further training.

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<sup>2</sup> Arizona, Arkansas, California, Georgia, Indiana, Kansas, Kentucky, Michigan, Minnesota, Missouri, New Jersey, North Carolina, Oregon, Texas, Washington



## Summary

Implementing the above plan will help us to improve patient care by allowing therapies that should be administered via the central venous system to be initiated sooner without sacrificing safety. Patient care should also be positively impacted by less frequent interruption in the radiologists' work day and less restrictions on PICC nurses' time.

## **Radiographic Assessment of Normal and Abnormal PICC Line Placement**

**Course Description:** *An overview of the anatomy and physiology of the vascular system as relates to PICC line placement and how to identify these structures on x-ray. Instruction will be given on appropriate PICC tip assessment via radiography.*

### **Outline**

#### **Identification of Normal and Abnormal PICC Line Placement by Chest Radiograph**

##### **I. Anatomy Review with Radiologic Correlation**

###### **A. Peripheral Venous Anatomy**

1. Antecubital fossa
2. Brachial veins
3. Basilic veins
4. Cephalic veins
5. Axillary veins
6. Subclavian veins
7. Int / Ext Jugular veins
8. Minor venous branches

###### **B. Mediastinal / Central Venous Anatomy**

1. Brachiocephalic veins
  - a. right
  - b. left
2. Superior Vena Cava
3. Cavoatrial junction
4. Cardiac chambers
5. Coronary sinus
6. Azygous vein

###### **C. Variant and Accessory Venous Anatomy**

1. Left SVC
2. Accessory hemiazygous
3. Others

###### **D. Arterial Anatomy**

1. Brachial artery
2. Axillary artery
3. Subclavian artery
4. Arch and Great Vessels
5. Others (important branches)

###### **E. Osseous structures**

1. Clavicle / First Rib
2. Midclavicular line
3. Other

## G. Special Anatomic Considerations in Pediatric Patients

### II. The Chest Radiograph

#### A. The Cardiac Silhouette

1. Right Border - atrium and appendage
2. Left Border - atrium, appendage, RV, LV, pulmonary outflow

#### B. The Mediastinal Silhouette

1. Right Border
2. Left Border

#### C. Osseous Structures and Relationship to Underlying Vasculature

#### D. The Cavoatrial Junction

1. What is it?
  - a. CXR anatomy
  - b. CT anatomy
2. Why do we care?
  - a. cardiac pacemakers / arrhythmias
  - b. myocardial injury, perforation, tamponade
  - c. flow problems

#### E. Visualization of PICC lines by Chest Radiograph

1. CXR techniques
2. Positioning
3. Using the wire within scope of practice
4. Contrast agents (informational)

### III. Cases

#### A. Normal PICC tip positions

#### B. PICCs Gone Wild

1. Malpositioned tips
2. Arterial course
3. Extravascular placement
4. Kinking and Coiling
5. Catheter damage
6. Others

### IV. Quiz

Policy and Procedure	
Title: Assessing Tip Placement of PICCs	Index No.
Department: Intravenous Therapy	Effective Date:
Date(s) Reviewed:	Date(s) Revised:
Approved by:	
Regional Coordinator of IV Therapy	Division Director
References: Infusion Nurses Society Standards of Practice: S5, Clinical Competency, S48, Catheter Placement; A process toward certifying registered nurses to read chest x-rays: experience in Washington state, JVAD, 2002.	

### Purpose

To determine that the peripherally inserted central catheter (PICC) is in correct position prior to initiating infusion therapy.

### Policy

The IV Therapy Registered Nurse who has completed an educational program related to assessing chest x-rays for tip placement of PICCs and has their competency validated through the Charlotte Regional Medical Center Radiology Department may assess chest x-rays for appropriate tip placement of PICCs\*. A radiologist will perform a definitive 'reading' of the chest x-ray within 24 hours.

\*Appropriate tip placement is considered to be in the distal SVC/cavoatrial junction, as per FDA guidelines and Infusion Nurses Society and Association of Vascular Access recommendations.

### Requirements:

1. The registered nurse must have three (3) months experience in PICC line insertion prior to completing the educational program.
2. The registered nurse must have 10 assessments documented as accurate by a radiologist to be deemed competent to assess for tip placement independently.
3. After initial competency validation, the registered nurse must maintain an accuracy of at least 95% (determined quarterly) to be deemed competent to assess for tip placement independently.
4. An accuracy rating of less than 95% in a quarter will result in the registered nurse being required to attend another educational program and have competency re-assessed.

### Procedure

1. Ensure that a chest x-ray has been ordered to verify tip placement after PICC insertion.
2. View the x-ray in the Medical Imaging Department or via a radiology computer station on a nursing unit.
3. Verify correct patient name, account number, date, and time of film.
4. Ensure that the film is in the correct position, i.e., the apex of the patient's heart should be directed toward your right side as you stand facing the film.
5. Check the catheter position:
  - Locate the insertion site if possible or be able to locate the catheter in the arm in which insertion was performed
  - Trace the path of the catheter to the catheter tip

- > Assess that the catheter tip is in the Superior Vena Cava and parallel to the vessel walls. Generally, the vein will be approximately one or two intercostals spaces below the aortic arch.
- 6. If malposition is overt, the catheter must be repositioned and x-ray confirmation obtained.
- 7. If malposition is suspected, obtain a lateral view if at all possible.  
Note: Suspect malposition if blood return is absent or poor, it is difficult to flush the catheter, or if there has been unusual resistance to catheter advancement.
- 8. Contact the radiologist if unable to assess tip placement.
- 9. Notify the appropriate nursing staff that the line may be used when tip placement is assessed as correct.
- 10. Document tip placement on the PICC Data Sheet and in the physician's progress notes.
- 11. Fill out the Radiographic Assessment of PICC Placement form and take to the physician's reading room in the Medical Imaging Department. The radiologist performing the official reading of the x-ray film will complete the form and it will be routed to the IV Therapy Department.

#### Follow Up Procedure

1. An IV nurse should check the official 'reading' of the x-ray film the following day.
2. The radiologist's determination of tip placement should be noted on the PICC Tip Assessment Performance Improvement Monitor (PI Tool) appropriately.
3. The PI tools are to be reviewed by the Clinical Leader and/or the Regional IV Therapy Coordinator and statistics kept in the department for ongoing competency validation.
4. Differences in tip determinations are to be referred to and discussed with the radiologist(s) involved. Recommendations and instructions will be noted on the PI tool.

**Radiographic Assessment of PICC Placement**

Date of Exam: _____	Time of Exam: _____
Radiologist: _____	IV Nurse: _____

**\*Initial Assessment of Tip Placement:**

- Distal SVC/Cavoatrial Junction
- Proximal or Mid SVC
- Right Atrium, Right Ventricle, Pulmonary Artery, IVC
- Ipsilateral Subclavian, Brachiocephalic, Internal Jugular Vein
- Contralateral Subclavian, Brachiocephalic, Internal Jugular Vein
- Other \_\_\_\_\_
- Cannot Determine

**Action:**

- None required, placement appropriate
- Pull back \_\_\_\_\_ cm
- Advance \_\_\_\_\_ cm
- Reposition catheter: \_\_\_\_\_
- Repeat x-ray
- Request lateral view x-ray to rule out malposition
- Consult radiologist: \_\_\_\_\_

**Released for Use:** \_\_\_\_\_  
IV Nurse Signature

Total Number of X-rays \_\_\_\_\_

**\*Final Assessment of Tip Placement:**

- Agree
- Disagree \_\_\_\_\_

\_\_\_\_\_  
Radiologist Signature

\*Per FDA Guidelines, INS and AVA recommendations, PICC tip placement should be in the distal SVC/cavoatrial junction. This landmark is formed by the shadow of the distal SVC and right atrial appendage (the area where the right atrium makes a slight convex bulge in relation to the relatively straight distal SVC shadow). A PICC tip located up to 2 cm proximal or distal to this point will be considered within the distal SVC.

Patient ID

**PICC Tip Assessment Tool**  
IV Therapy (9/2005)

PICC Tip Assessment Performance Improvement Monitor

Patient Name: \_\_\_\_\_

Account No.: \_\_\_\_\_

Radiologist: \_\_\_\_\_

IV Nurse: \_\_\_\_\_

Nurse Determination of Tip Placement:

- Distal SVC/Cavoatrial Junction
  - Other \_\_\_\_\_
  - Released for Use
  - Not Released/Reason/Action: \_\_\_\_\_
- 

Radiologist Determination of Tip Placement: \_\_\_\_\_

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Review:

- Film reviewed by IV Nurse and Radiologist
- IV Nurse/Radiologist Agreement
- IV Nurse/Radiologist Non-Agreement

Resolution:

- No action necessary
- PICC repositioned \_\_\_\_\_
- PICC removed

Notes/Action:

## Oregon State Board of Nursing - Policy Statement

## Oregon State Board of Nursing Advisory Guidelines for Infusion Therapy

**Statement of Purpose**

The primary purpose of these Advisory Guidelines is to differentiate the role and responsibility of the Licensed Practical Nurse, Registered Nurse, Licensed Practical Nurse with advanced training, and the Registered Nurse with advanced training in infusion therapy. Included in this document are the basic requirements for education, competencies and limitations of role.

**Background Information**

Nursing practice is a dynamic process. Treatment modalities and technology define the scope of nursing practice relating to infusion therapy. Patients, from the neonate to the geriatric receive infusion therapy. They represent a wide variety of diagnoses and severity of illnesses. Having acquired knowledge and skill in infusion therapy, the infusion therapy nurse may be a Registered Nurse (RN) or a Licensed Practical Nurse (LPN). The practice setting may be a variety of settings such as hospitals, private homes, healthcare facilities or other alternative care sites. The purpose of the Advisory Guidelines for Infusion Therapy is to guide and preserve the patient's right to safe, quality infusion care provided by competent nurses (RN and/or LPN). This document gives a description of acceptable nursing practice relating to Infusion therapy.

**I. Core Competencies in Infusion Therapy**

It is the expectation that the following competencies are gained through the basic education leading to initial licensure. This core nursing education includes theory and supervised clinical practice of technical skills and equipment used. If these competencies were not gained through basic education of the Registered Nurse or Licensed Practical Nurse, it is the expectation these be attained before performing infusion therapy.

Education, training, experience and ongoing competency appropriate to responsibilities, treatment provided and the patient/client population served is evidenced in personnel files and/or individual portfolios.

**Nursing Roles and Responsibilities:**Registered Nurse

- Assesses and evaluates health status.
  - Collects data.
  - Analyzes, reports and records data.
  - Validates, refines and modifies data.
- 
- Utilizes all data to identify and document health care problems.
  - Makes judgements, decisions and modifies care.
- 
- Establishes short and long term realistic goals.
  - Sets realistic and measurable goals.

Licensed Practical Nurse

- Contributes to assessment by: collecting, reporting and recording objective and subjective data.
  - Observes condition or change in condition.
- 
- Assists in formulating needs / problems.
- 
- Contributes to setting measurable goals by identifying short and long term goals.



## Oregon State Board of Nursing - Policy Statement

1. The RN and LPN must possess a knowledge of:
  - A. Anatomy and physiology of age-specific disease processes and recognition of normal and abnormal laboratory values.
  - B. Organizational policies and procedures pertaining to infusion therapy.
  - C. Specific signs and symptoms of infusion therapy complications and actions to be taken in the event of suspected adverse reaction or complication.
  - D. Interventions specific to the drugs and intravenous solutions, infusion access device, supplies and infusion equipment to achieve desired patient outcomes including:
    - i. special patient specific considerations regarding delivery systems;
    - ii. treatment modalities; such as dosing, site selection; and
    - iii. psychological implications
  - E. Drugs which include, at a minimum, drug actions, potential complications, side-effects, untoward effects and storage instructions to ensure safe administration.
  - F. Proper function, care and maintenance of supplies and equipment used in the delivery of infusion therapy and action to be taken in the event of problems or adverse situations.
  
2. The RN and LPN must be able to demonstrate:
  - A. Ability to correctly calculate flow rate.
  - B. Principles of asepsis and standard precautions in the management of infusion methods.
  - C. Techniques for prevention of infection, phlebitis, occlusion, and infiltration / extravasation
  
3. The RN and LPN providing care must:
  - A. Validate the authorized prescriber's specific infusion therapy order including dosage, frequency, rate, mode of administration, and duration.
  - B. Identify and utilize resources available for acquiring information concerning patient/client specific medications, including knowledge of resources available for immediate consultation in adverse situations.
  - C. Assess and/or observe patient's physical and psychosocial status, with appropriate interventions including measures for the prevention of adverse reactions and complications.
  - D. Coordinate and communicate with healthcare providers.
  - E. Educate peers, patient/client and/or caregivers based on patient/client need relative to the prescribed infusion therapy and care plan and appropriate to the care setting.
  - F. Document in the medical record:
    - i. patient assessment,
    - ii. prescribed therapy,
    - iii. initiation, ongoing monitoring and discontinuation of treatment
    - iv. patient response.
  
- II. Additional Competencies
  - A. With appropriate knowledge and demonstrated competency the following may be performed by a LPN or RN:
    1. Maintaining an infusion via ambulatory infusion pump, including narcotics
    2. Administering central line drugs and fluids
    3. Accessing implanted port
    4. Inserting/discontinuing a peripheral line
    5. Maintaining total parenteral nutrition (TPN)
    6. Maintaining non-obstetrical epidurals
    7. Changing central line dressings
    8. Administering narcotics by direct push

## Oregon State Board of Nursing • Policy Statement

- B. The RN, with advanced knowledge and demonstrated competency, may administer and monitor the following therapies:
1. Medication via ambulatory infusion pump
  2. Vesicant medications with knowledge of extravasation protocols
  3. Antineoplastic medications
  4. Vasoactive drugs
  5. Antiarrhythmic therapy
  6. Thrombolytic therapy
- C. The RN, with advanced knowledge and demonstrated competency, may perform the following procedures:
1. Exchange of existing CVC over a guidewire
  2. ~~X-ray identification of catheter tip location for PICC line placement.~~
  3. Suturing of central venous catheters
  4. Central venous catheter blood draw
  5. Therapeutic phlebotomy
  6. Autologous blood donor draw
  7. Peripherally inserted central catheter (PICC)/midline placement and/or exchange
  8. Catheter clearance
    - a. nonthrombotic occlusion
    - b. thrombotic occlusion.
  9. Catheter repair, temporary or permanent
  10. Access nonvascular sites.
    - a. epidural, except antepartal care.
    - b. Intraosseous
    - c. Intrathecal
  11. Discontinuation of peripheral – short, midline, midclavicular, and peripherally inserted central catheter (PICC).
  12. Arterial and hemodynamic pressure monitoring.
  13. Refill/reprogram implanted pumps

## III. Limitations of Licensed Practical Nursing (LPN) Infusion Therapy:

- A. The following items may not be initiated but may be monitored or performed by a LPN under the direct supervision of a RN. Direct supervision means that a Registered Nurse, Clinical Nurse Specialist, Nurse Practitioner, physician or dentist is physically present and accessible in the immediate client care area and available to intervene if necessary.
1. antineoplastic agents
  2. blood and blood components
  3. antiarrhythmic including digitalis
  4. antiseizure medication including valium, dilantin
  5. initiation of ambulatory infusion device, such as CADD pump
  6. hypertensive agents
- B. The following items are not within the core or advanced competencies for a LPN and should not be performed by LPN even with additional training:
1. pharmacological agents not allowed by agency or facility policy and procedure
  2. arterial blood draws
  3. mid line and PICC placement
  4. catheter declothing
  5. drawing blood from a central venous catheter
  6. removal of PICC and mid line

Oregon State Board of Nursing • Policy Statement

7. obstetric epidurals
8. temporary epidurals
9. temporary and permanent catheter repair.

IV. Definitions

Reference: Intravenous Nurses Society (INS). Infusion Nursing Standards of Practice. Journal of Intravenous Nursing. Vol.23, No 6S, November/December 2000.

**Ambulatory Infusion Device.** Electronic infusion device specifically designed to be worn on the body to promote patient mobility and independence.

**Antineoplastic Agent.** Medication that prevents the development, growth, or proliferation of malignant cells.

**Arterial Pressure Monitoring.** Monitoring of arterial pressure through an indwelling arterial catheter connected to an electronic monitor.

**Aseptic Technique.** Mechanisms employed to reduce potential contamination.

**Catheter.** Tube for injecting or evacuating fluids.

**Central Venous Catheter.** Catheter inserted into a centrally located vein with the tip residing in the vena cava; permits intermittent or continuous infusion and/or access into the venous system.

**Delivery System.** Product that allows for the administration of medication. The system can be integral or can have component parts and includes all products used in the administration, from the solution container to the catheter.

**Document.** Written or printed record containing original, official, or legal information.

**Documentation.** Record in written or printed form, containing original, official, or legal information.

**Epidural Space.** Space superior to the dura mater of the brain and the spinal cord and inferior to the ligamentum flavum.

**Extravasation.** Inadvertent infiltration of vesicant solution or medication into surrounding tissue; rated by a standard scale.

**Hemodynamic Pressure Monitoring.** General term for determining the functional status of the cardiovascular system as it responds to acute stress such as myocardial infarction and cardiogenic or septic shock. A pulmonary artery catheter is used to directly measure intracardiac pressure changes, cardiac output, blood pressure, and heart rate.

**Implanted Port.** A catheter surgically placed in a vessel or body cavity and attached to a reservoir located under the skin.

**Implanted Pump.** A catheter surgically placed into a vessel or body cavity and attached to a reservoir located under the skin that contains a pumping mechanism for continuous medication administration.

## Oregon State Board of Nursing • Policy Statement

**Incompatible.** Incapable of being mixed or used simultaneously without undergoing chemical or physical changes or producing undesirable effects.

**Infiltration.** Inadvertent administration of a nonvesicant solution or medication into surrounding tissue; rated by a standard scale.

**Infusate.** Parenteral solution administered into the vascular or nonvascular systems; infusion.

**Injection/Access Port.** Resealable cap or other configuration designed to accommodate needles or needless devices for administration of solutions into the vascular system.

**Intraosseous.** Within the bone substance.

**Intrathecal.** Within the spinal canal.

**Intermittent Intravenous Therapy.** Intravenous therapy administered at prescribed intervals with periods of infusion cessation.

**Midclavicular Catheter.** A long peripheral catheter in which the distal end resides in the proximal axillary or brachiocephalic (innominate vein). It is not a central line.

**Midline Catheter.** A long peripheral catheter in which the distal end resides in the mid to upper arm.

**Nurse Practice Act.** Legislation that defines the practice of registered nurses and licensed practical nurses within the state. Oregon Nurse Practice Act Chapter 678.

**Parenteral.** Administered by any route other than the alimentary canal, such as the intravenous, subcutaneous, intramuscular, or mucosal route.

**Parenteral Nutrition.** Intravenous provision of total nutritional needs for a patient who is unable to take appropriate amounts of food enterally; typical components include carbohydrates, proteins, and/or fats, as well as additives such as electrolytes, vitamins, and trace elements.

**Phlebitis.** Inflammation of a vein; may be accompanied by pain, erythema, edema, streak formation, and/or palpable cord; rated by a standard scale.

**Phlebotomy.** Withdrawal of blood from a vein.

**Peripherally Inserted Central Catheter (PICC).** Soft, flexible central venous catheter inserted into an extremity and advanced until the tip is positioned in the vena cava.

**Process.** Actual performance and observation of performance based on compliance with policies, procedures, and professional standards.

**Standard.** Authoritative statement enunciated and promulgated by the profession by which the quality of practice, service, or education can be judged.

**Thrombolytic Agent.** Pharmacological agent capable of dissolving blood clots.

**Thrombophlebitis.** Inflammation of the vein in conjunction with formation of a blood clot (thrombus).

Oregon State Board of Nursing • Policy Statement

**Thrombosis.** Formation, development or existence of a blood clot within the vascular system.

**Thrombolytic.** Pertaining to a drug or other agent that dissolves thrombi.

**Vesicant.** Agent capable of causing injury when it escapes from the intended vascular pathway into surrounding tissue.

Adopted: September 20, 2001



Janet Napolitano  
Governor

Joey Ridenour  
Executive Director

## Arizona State Board of Nursing

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Phoenix, AZ 85020-4613  
Phone (602) 331-8111 Fax - (602) 906-9365  
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OPINION: P.I.C.C. LINES  
APPROVED: DATE 10/87  
REVISED DATE: 3/95, 1/99, 4/99,  
10/2, 11/00, 5/04  
ORIGINATING COMMITTEE:  
SCOPE OF PRACTICE COMMITTEE

### ADVISORY OPINION PERIPHERALLY INSERTED CENTRAL CATHETER (PICC) INSERTION, RADIOGRAPHIC VERIFICATION OF PLACEMENT & REMOVAL

It is within the Scope of Practice of a Registered Nurse to insert and/or verify tip placement via x-ray and/or secure and remove central catheters through peripheral venous sites if the following requirements are met:

#### I. General Requirements

- A. *Written policy and procedures are maintained by the agency/employer.*
- B. Completion of an instructional program and have supervised clinical practice to insert and/or verify per x-ray tip placement, and/or secure (which may include suturing) and/or remove centrally placed catheters through peripheral sites.
- C. Documentation of satisfactory completion of the instruction program and supervised clinical practice including successful performance of 3 radiographic assessments of PICC location monitored by a radiologist on the medical staff is on file with the employer.
- D. Confirmation of PICC placement by a radiologist within 24 hours of placement.

#### II. Course of Instruction is to Include but not be limited to the following, as applicable to the individual's scope, as designated by the agency/employer:

- A. For nurses performing duties to include insertion with radiographic verification of PICC line tip placement:
  1. Anatomy and physiology of circulation and fluid balance
  2. Indications and contraindications for PICC placement
  3. Complications and management techniques to include potential adverse reaction
  4. Radiographic assessment of PICC tip location
  5. Techniques for placement of PICC lines may include, but not be limited to, seldinger and ultrasound techniques.
  6. Techniques for PICC lines placement and removal
  7. Nursing responsibilities

- B. For nurses performing duties to include insertion:
  - 1. Anatomy and physiology of circulation and fluid balance
  - 2. Indications and contraindications for PICC placement
  - 3. Complications and management techniques to include potential adverse reactions
  - 4. Technique for PICC line placement and removal
  - 5. Nursing responsibilities
- C. For nurses performing duties that would include management and monitoring of PICC lines:
  - 1. Anatomy and physiology of circulation and fluid balance
  - 2. Indications and contraindications for PICC placement
  - 3. Complications and management techniques to include potential adverse reactions
  - 4. Nursing responsibilities
- D. For nursing performing the duties of PICC line removal:
  - 1. Techniques for PICC line removal
  - 2. Complications and management techniques to include potential adverse reactions
  - 3. Nursing responsibilities

**RATIONALE:**

The expertise of the nurse trained to insert PICC lines is consistent with current state of practice as outlined by the Intravenous Nurse Society and the Infusion Nurse standards of Practice, as to ensure safe practice and continuity of care for patients.

**REFERENCES:**

Intravenous Nurses Society, Infusion Nurse Standards of Practice Journal of Intravenous Nursing 2000;23 Royer, T.I. A process toward certifying registered nurses to read chest x-rays: Experience in Washington State JVAD 2002

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:

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<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/guidewires. 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 guidepost 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:

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<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 registered nurse practitioner 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 registered nurse practitioner 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

**BOARD OF REGISTERED NURSING**

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Ruth Ann Terry, MPH, RN  
Executive Officer

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**AN EXPLANATION OF THE SCOPE OF RN PRACTICE**  
**including standardized procedures**

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The Legislature, in its 1973-74 session, amended Section 2725 of the Nursing Practice Act (NPA), amplifying the role of the registered nurse and outlining activities which comprise the practice of nursing.

**LEGISLATIVE INTENT**

The Legislature recognized that nursing is a dynamic field, continually evolving to include more sophisticated patient care activities. It declared its intent to recognize the existence of **overlapping functions** between physicians and registered nurses and to permit **additional such sharing** and to provide **clear legal authority** for those functions and procedures which have common acceptance and usage. Prior to this, nurses had been educated to assume advanced roles, and demonstration projects had proven their ability to do this safely and effectively. Thus, legal amplification of the role paralleled the readiness of nurses to assume the role and recognized that many were already functioning in an expanded role.

**SCOPES OF PRACTICE**

A knowledge of the respective scopes of practice of registered nurses and physicians is important in determining **which activities overlap** medical practice and therefore require standardized procedures. Failure to distinguish nursing practice from medical practice may result in the limitation of the registered nurse's practice and the development of unnecessary standardized procedures. Registered nurses are cautioned not to confuse nursing policies and procedures with standardized procedures.

**1. Scope of Registered Nursing Practice**

The activities comprising the practice of nursing are outlined in the Nursing Practice Act, Business and Professions Code Section 2725. A broad, all inclusive definition states that the practice of nursing means those functions, including basic health care, which help people cope with difficulties in daily living which are associated with their actual or potential health or illness problems, or the treatment thereof, which require a substantial amount of scientific knowledge or technical skill.

In Section 2725(a), the Legislature expressly declared its intent to provide clear legal authority for functions and procedures which have common acceptance and usage. Registered nurses must recognize that the application of nursing process functions is common nursing practice which **does not** require a standardized procedure. Nursing practice is divided into three types of functions, which are described below.

### **A. Independent Functions**

Subsection (b)(1) of Section 2725, authorizes direct and indirect patient care services that insure the safety, comfort, personal hygiene and protection of patients, and the performance of disease prevention and restorative measures. Indirect services include delegation and supervision of patient care activities performed by subordinates.

Subsection (b)(3) of Section 2725, specifies that the performance of skin tests, immunization techniques and withdrawal of human blood from veins and arteries is included in the practice of nursing.

Subsection (b)(4) of Section 2725, authorizes observation of signs and symptoms of illness, reactions to treatment, general behavior, or general physical condition and determination of whether these exhibit abnormal characteristics; and based on this determination, the implementation of appropriate reporting or referral, or the initiation of emergency procedures. These independent nursing functions have long been an important focus of nursing education, and an implied responsibility of the registered nurse.

### **B. Dependent Functions**

Subsection (b)(2) of Section 2725, authorizes direct and indirect patient care services, including, but not limited to, the administration of medications and therapeutic agents necessary to implement a treatment, disease prevention, or rehabilitative regimen ordered by and within the scope of licensure of a physician, dentist, podiatrist or clinical psychologist.

### **C. Interdependent Functions**

Subsection (b)(4) of Section 2725, authorizes the nurse to implement appropriate standardized procedures or changes in treatment regimen in accordance with standardized procedures after observing signs and symptoms of illness, reactions to treatment, general behavior, or general physical condition, and determining that these exhibit abnormal characteristics. These activities overlap the practice of medicine and may require adherence to a standardized procedure when it is the nurse who determines that they are to be undertaken.

## **-2. Scope of Medical Practice**

The Medical Practice Act authorizes physicians to **diagnose** mental and physical conditions, to **use drugs in or upon human beings, to sever or penetrate the tissues of human beings and to use other methods** in the treatment of diseases, injuries, deformities or other physical or mental conditions. As a general guide, the performance of any of these by a registered nurse requires a standardized procedure; however, activities within each of these categories have already become common nursing practice and therefore do not require standardized procedures; for example, the administration of medication by injection requires penetration of human tissue, and registered nurses have performed this function through the years.

In Section 2725(a), the Legislature referred to the dynamic quality of the nursing profession. This means, among other things, that some functions which today are considered medical practice will become common nursing practice and no longer require standardized procedures. Examples of medical functions which have evolved into common nursing functions are the measurement of cardiac output pressures, and the insertion of PICC lines.

### **STANDARDIZED PROCEDURES FOR MEDICAL FUNCTIONS**

The means designated to authorize performance of a medical function by a registered nurse is a standardized procedure developed through collaboration among registered nurses, physicians and administrators in the **organized health care system** in which it is to be used. Because of this

interdisciplinary collaboration, there is accountability on several levels for the activities to be performed by the registered nurse. Section 2725(a) defines "organized health care systems" to include, but are not limited to, licensed health facilities, clinics, home health agencies, physicians' offices, and public or community health services.

#### **GUIDELINES FOR DEVELOPING STANDARDIZED PROCEDURES**

Standardized procedures are **not subject to prior approval** by the boards that regulate nursing and medicine; however, they must be developed according to the following guidelines which were jointly promulgated by the Board of Registered Nursing and the Medical Board of California. (Board of Registered Nursing, Title 16, California Code of Regulations (CCR) section 1474; Medical Board of California, Title 16, CCR Section 1379.)

- (a) Standardized procedures shall include a written description of the method used in developing and approving them and any revision thereof.
- (b) Each standardized procedure shall:
  - (1) **Be in writing, dated and signed by the organized health care system** personnel authorized to approve it.
  - (2) Specify **which standardized procedure functions** registered nurses may perform and under what circumstances.
  - (3) State any **specific requirements which are to be followed** by registered nurses in performing particular standardized procedure functions.
  - (4) Specify any **experience, training and/or education** requirements for performance of standardized procedure functions.
  - (5) Establish a method for initial and continuing **evaluation** of the competence of those registered nurses authorized to perform standardized procedure functions.
  - (6) Provide for a method of maintaining a written record of those **persons authorized to perform** standardized procedure functions.
  - (7) Specify the scope of **supervision** required for performance of standardized procedure functions, for example, telephone contact with the physician.
  - (8) Set forth any specialized circumstances under which the registered nurse is to **immediately communicate with a patient's physician** concerning the patient's condition.
  - (9) State the limitations on **settings**, if any, in which standardized procedure functions may be performed.
  - (10) Specify patient **record-keeping** requirements.
  - (11) Provide for a method of **periodic review** of the standardized procedures.

An additional safeguard for the consumer is provided by steps four and five of the guidelines which, together, form a **requirement that the nurse be currently capable** to perform the procedure. The registered nurse who undertakes a procedure without the competence to do so is grossly negligent and subject to discipline by the Board of Registered Nursing.

**Standardized procedures which reference textbooks and other written resources in order to meet the requirements of Title 16, CCR Section 1474 (3), must include book**

(specify edition) or article title, page numbers and sections. Additionally, the standards of care established by the sources must be reviewed and authorized by the registered nurse, physician and administrator in the practice setting. A formulary may be developed and attached to the standardized procedure. Regardless of format used, whether a process protocol or disease-specific, the standardized procedure must include all eleven required elements as outlined in Title 16, CCR Section 1474.

#### **SUMMARY OF RN FUNCTIONS UNDER STANDARDIZED PROCEDURES**

Registered nursing functions under standardized procedures may be summarized as follows:

- WHO: the registered nurse
- WHAT: may perform a medical function beyond the usual scope of RN practice
- HOW: in accord with a written standardized procedure developed by nursing, medicine and administration
- WHERE: In an organized health care system
- WHEN: after the RN has been evaluated and approved as having met the education and experience requirements specified in the procedure
- WHY: because the standardized procedure authorizes the RN to exceed the usual scope of RN practice

#### **STANDARDIZED PROCEDURE EXAMPLES**

The attached three example formats (Example A, a process protocol, Example B, a disease specific, and Example C, a procedure specific standardized procedure), conform to the guidelines and are adopted from existing practice protocols for standardized procedures and may be used as a guide in developing one's own standardized procedures.

The Board of Registered Nursing does not recommend or endorse the medical management of these example protocols.

# Arkansas

Position Statement
99-2
Delegated Medical Acts

The definition of professional nursing found in the *Arkansas State Board of Nursing Nurse Practice Act* includes the administration of medications or treatments as prescribed by practitioners authorized to prescribe and treat in accordance with state law. In carrying out orders for the administration of treatments, RNs are engaged in the practice of professional nursing. However, in carrying out some physician orders, RNs may perform acts not usually considered to be within the scope of professional nursing practice. These tasks are delegated and supervised by physicians. This position statement provides guidance to the RN by clarifying the RN's responsibilities in carrying out delegated medical acts.

It is the Board's position that an RN may carry out the delegated medical act if the following criteria are met:

1. The RN has received appropriate education and supervised practice, is competent to perform the procedure safely and can respond appropriately to complications and/or untoward effects of the procedure;
2. The RN's education and skill assessment is documented in the RN's personnel record;
3. The nursing and medical staffs have collaborated in the development of written policies/protocols/practice guidelines for the delegated acts and response to complications. These documents are available to nursing staff practicing in the facility and are reviewed annually;
4. The procedure has been ordered by an appropriate licensed practitioner;
5. Appropriate medical and nursing backup is available; and
6. The delegated act is not prohibited by any other practice act, rule, regulation, or position statement (e.g., anesthetic agents, other than local anesthetics, can only be administered by the RN if he/she holds a CRNA license).

The Arkansas State Board of Nursing's document 98-6 entitled "Scope of Practice Decision Making Model" should be reviewed by the RN in conjunction with this position statement.

*Approved June 23, 1999*



**Rhoden, Ladena - Peace River**

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**From:** Rhoden, Ladena  
**Sent:** Thursday, December 22, 2005 8:59 AM  
**To:** Rhoden, Ladena - Peace River  
**Subject:** FW: RNs verifying tip termination on CXR

-----Original Message-----

**From:** owner-venous@mailsrv1.ohsu.edu [mailto:owner-venous@mailsrv1.ohsu.edu] **On Behalf Of** Midwest Vascular Access  
**Sent:** Wednesday, December 21, 2005 8:56 PM  
**To:** 'Leigh Ann Bowe-geddes'; Vickie\_Holmes@Memorial.org; venous@ohsu.edu; vascular@smartgroups.com  
**Subject:** RE: RNs verifying tip termination on CXR

You can add Kansas to your list!

Michelle Followell, RN, CNN, CRNI

-----Original Message-----

**From:** owner-venous@mailsrv1.ohsu.edu [mailto:owner-venous@mailsrv1.ohsu.edu] **On Behalf Of** Leigh Ann Bowe-geddes  
**Sent:** Thursday, October 13, 2005 6:09 PM  
**To:** Vickie\_Holmes@Memorial.org; venous@ohsu.edu; vascular@smartgroups.com  
**Subject:** RNs verifying tip termination on CXR

Vickie:

We do that here. There are 14 states known to have facilities that are doing this:

Arizona  
Arkansas  
California  
Georgia  
Indiana  
Kentucky  
Michigan  
Minnesota  
Missouri  
New Jersey  
North Carolina  
Oregon  
Texas  
Washington

Most of these are states that utilize a decision tree model for determination of scope of practice. We have the decision tree, but our Board also issues opinion statements. Previously, the opinion statement concerning PICCs mentioned that an x-ray must be done if the tip passed the shoulder, and that a physician must read the x-ray prior to use. We got them to change this, and the opinion statement now addresses RNs verifying initial tip termination (NOT reading the x-ray). Go to [kbn.ky.gov](http://kbn.ky.gov), click on Practice Issues (or something like that - it is on the left hand side), then click on Advisory Opinion Statements. It is AOS # 25.

To get the Board to approve this change I sent them a letter, explaining our intention and request. In the letter I also explained our plan for competency validation and maintenance, and informed them of other states in which this was already being done. I included a letter of support from one of our

12/29/2005

Radiology attendings, a copy of the Opinion Statement (similar to our current one) from Oregon Board of Nursing, a copy of the JVAD article that Tim Royer wrote on the subject. I directed all of this to the Chair of the Practice Committee. She then invited us to make a formal presentation to the committee, and asked that we send enough copies of all of the above for each committee member to have one. With those copies we included some policies for competency and process from other facilities throughout the country that were already doing tip verification. The committee Chairperson distributed all this information in advance to the committee members, so that they were aware of the information before the meeting. My manager spoke to the committee at the meeting, explaining that we want the right people to be doing the right things, and how this benefits patient care. The long history of this practice in states such as Texas and Georgia didn't hurt. The committee unanimously agreed to recommend this to the full Board. It was approved at the next Board meeting, and we were free to move forward with it.

I recommend having a solid plan for training and competency in advance of approaching the Board. If you are in a state where this is already being done, or one which has a decision tree and no written limitation concerning this, you may not need to ask the Board for permission. The purpose of the decision tree is to assist in determining scope of practice. If you can follow the decision tree and clearly see that this is within your scope of practice, you don't need extra endorsement from the Board.

If you do need to ask the Board, point out that Kentucky, a contiguous state, is doing this with the Board's blessing. I will point out that I called TN Board of Nursing when we were researching this, to find out if they allowed it. They were unable to answer me either way.

Good Luck!

Leigh Ann

Leigh Ann Bowe-Geddes, RN, CRNI  
IV Therapy Specialist  
Infusion Services Department  
University of Louisville Hospital  
Louisville, KY  
502-562-3530

\_\_\_\_\_ NOD32 1.1208 (20050902) Information \_\_\_\_\_

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<http://www.eset.com>

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12/29/2005

# A process toward certifying registered nurses to read chest x-rays: experience in Washington state

*Timothy Ian Royer, BSN, CRNI*

## Introduction

Infusion registered nurses (RNs) have been viewing chest radiographs since they began inserting peripherally inserted central catheters (PICCs), but it has always been, for the most part, the radiologists who have read the chest x-rays and approved use of the PICC. Very few institutions around the United States enable an IV Team RN to read the chest x-rays for PICC tip position and release the PICC for use.<sup>1</sup> (This article will not discuss the semantics of the word "read" in relation to whether or not it is a legal word for nurses to use when interpreting chest radiographs for PICC tip placement.)

There are a few institutions in the United States that have developed programs wherein the RN is deemed competent in verifying the tip position after PICC insertions. The first such program was developed at The MD Anderson Cancer Center (Houston, TX), with others at Houston Northwest Medical Center, Oregon Health Sciences Medical Center (Portland, OR), and Wake Medical Center (NC). Most are based upon the MD Anderson Model of education, training, experience, and maintenance of this skill. In each case, the scope of practice is limited to the RN verifying

catheter tip placement, with a radiologist or physician being responsible for reading the chest film for complications and providing the "official" reading of the x-ray image.<sup>1</sup>

At the Veterans Administration, Puget Sound Health Care System, Seattle, Washington, infusion RNs began viewing chest x-rays for PICC tip placement in August of 2001. This practice was initiated when a few experienced members of the IV Team approached the nurse manager of the IV Team with the idea of reading chest x-rays for PICC tip placement and then being able to release the PICC for use. Some of the reasons behind wishing to have this capacity were that the RN inserting the PICC could then correct problems with that placement in a timely manner; such experience generates a learning environment for the RN that places her/him at the cutting edge of our profession; and such experience assists in the development and maintenance of critical thinking skills, resulting in professional growth and advancement.

## Developing a program of training RNs to review x-ray images

Beginning a program that permits RNs

to review x-ray images starts at the level of the State Board of Nursing. Every State Board of Nursing is different in its determination of a nurse's scope of practice. Some allow RNs to perform very few tasks other than those specified in the state policy, some are vague as to what those tasks include, and others want to empower their RNs in determining the scope of their practice. Most regulations and Practice Acts for various states can be downloaded off the Internet.<sup>1</sup>

The state of Washington's State Board of Nursing is one that wants to empower their RNs. Under Washington Administration Code 246-840-299 definitions, an advanced nursing practice is "the delivery of expert nursing care by registered nurses who have acquired experience and formal education in specialized areas."<sup>2</sup> One can build upon this definition with designation under Revised Code of Washington 18.79.260 that an RN "at or under the general direction of a licensed physician...acting within the scope of practice of her license, [may] administer medications, treatments, tests, and inoculations, whether or not the severing or penetration of tissues is involved and whether or not a degree of independent judgment and skill is required"

(emphasis added).“ Further, under RCW 18.79.040, Washington state’s regulations define that registered nursing practice “means the performance of acts requiring substantial specialized knowledge, judgment, and skill based on the principles of the biological, physiological, behavioral, and socio-logical sciences in either:

(e) The executing of a medical regimen as prescribed by a licensed physician and surgeon, dentist, osteopathic physician and surgeon, podiatric physician and surgeon, physician assistant, osteopathic physician assistant, or advanced registered nurse practitioner.”

And if that support were not sufficient, the Washington State Nursing Practice Act states that the registered nurse is responsible and accountable for his/her practice based upon education, demonstrated competency, and experience; shall obtain as necessary before implementing new or unfamiliar techniques or procedures which are in his/her scope of practice instruction, supervision, and consultation; and the registered nurse shall be responsible for maintaining current knowledge in his/her field of practice.”

#### A decision tree to determine scope of practice

In 1999, Washington State’s Nursing Care Quality Assurance Commission adopted and published a decision tree to use in determining a nurse’s scope of practice. In this decision tree the degree of independence in performing activity, skill or procedure is considered, with the assistance of questions such as: Has the patient-prescriber relationship been established? Is the nurse following the prescribed medical regimen? Are there quality assurance mechanisms in place in order to evaluate the performance of the skill or task? What is the community standard? and Is there a body of knowledge for the practice cited in the nursing literature?”

The decision tree used in Washington State is as follows: Describe the act to be performed. Review the scope of practice for your licensure level:

1. Is the act expressly permitted or

prohibited by the Nurse Practice Act for the license you hold?

- Unsure (Go to #2)
- Within Scope
- Prohibited

2. Is the act consistent with at least one of the following standards?

- Nursing Commission standards of practice
  - National nursing organization standards of practice
  - Nursing literature and research
  - Reasonable, prudent nurse in similar circumstances
- Yes (Go to #3)  
 No (Stop, not within the scope of practice)

3. Do you personally possess the depth and breadth of knowledge to perform the act safely and effectively, as acquired in a pre-licensed program, post-basic program, continuing education program or structured self-study?

- Yes (Go to #4)
- No (Stop until additional knowledge is gained)

4. Do you personally possess current clinical skills to perform the act safely?

- Yes (Go to #5)
- No (Stop until clinical skills are attained)

5. Is the performance of the act within the accepted “standard of care” which would be provided in similar circumstances by reasonable and prudent nurses who have similar training and experience and consistent with appropriately established facility/agency policies and procedures?

- Yes (Go to #6)
- No (Stop, performance of act may place both patient/client and nurse at risk)

6. Are you prepared to accept the consequences of your action?

- Yes (Perform the Act)
- No (Stop, the accountability is not assumed! Notify appropriate person(s).)

*“With valid order when necessary, and in accordance with agency policies and procedures.”*

Following this decision tree, one can work with one’s state board of nursing toward the goal of using an agency’s power to allow nursing to expand its scope of practice as long as there is literature or research to support the RN’s education and instruction; the RN can demonstrate the skills with established competency; a medical regime still is delegated by a physician; and the nurse is willing to accept responsibility for

### Policy and Procedure at VA Puget Sound Health Care System, Seattle:

#### Purpose:

- Expanding the Scope of Practice to allow IV Team RNs to read chest x-rays for PICC tip placement allowing for quicker release of PICC for use.

#### Qualifications:

- IV Team RNs currently placing PICCs; Attendance at a Radiologist Class; Passing Chest X-ray PICC Tip Test; Certification by Radiology.

#### Scope of Practice:

- Read chest x-rays for determining placement of the proximal end of PICC.
- Releasing PICC for use.
- Reordering chest x-ray if film is unreadable for PICC tip placement after reviewing film with radiologist, or if radiologist is not available, may reorder.
- Primary Care Provider may overrule RNs interpretation.

#### Quality Improvement:

- Accuracy of x-ray readings will be maintained by Nurse Manager / IV Team.
- QI form will be filled out by each IV RN chest x-ray reading and given to NM.
- Each reading will be compared to the official radiologist’s reading for accuracy.
- Discrepancies will be noted and tracked and reports generated quarterly.
- Trends or discrepancies will be handled by further education.
- QI results will be freely shared with the Radiology Department and Nursing Service.

his/her actions. Other states have similar decision trees.

### Developing the practice in your institution

Even though getting a change of practice through your state's board of nursing can be daunting, once it is through the next stage is to make changes to your institution's policies and procedures. Your nursing clinical practice committee or nursing executive may not approve of the requested change at first, and those in the radiology services may not want to take responsibility for your instruction, practice or certification. Therefore, it is important to remember that nursing is a collaborative practice with other professionals and services.

At our facility, there is an intra-dependent collaboration with the radiology service and other services. This was greatly strengthened when we decreased the number of PICCs placed by staff in the interventional radiology department and when we assisted them with their computer-assisted tomographic x-ray imaging (CT scans) by scheduling the patients into our outpatient clinic to start their IV catheters. We also checked the patient's creatinine levels and hydrated them prior to their appointment when necessary. What was invaluable to this process was that the chief chest radiologist was totally in favor of infusion RNs reading chest x-rays for PICC tip placement. She had gained confidence in our ability to determine PICC tip placement on radiographs and on several occasions had confirmed the infusion nurse's interpretation of that placement.

The Nursing Clinical Practice Committee and Nursing Executive applauded expanding our scope of practice because it would improve patient care. We had their total support.

The traditional IV/PICC Team may prove to be a challenge when it comes to change. As with anything new, change may pose the most difficult obstacle to overcome. Many can be unsure of new skills ("the old way is fine"), since the traditional way has worked in the past and in their eyes everything is fine. Everybody may not readily accept this new empowerment.<sup>4</sup>

### Radiological education preparation of the infusion nurse

Probably the best way to educate the infusion nurse to read (or view, if the word "read" bothers you) chest x-rays for PICC tip placement, is to have regular radiographic rounds in which the IV RNs identify different structures and the location of the PICC tip. This does not have to be a physician or radiologist conducting these rounds; an experienced IV RN works well. Of course, for the more difficult films a radiologist should be consulted. This became much easier when radiographs became digitized and we could bring them up on the computer and save the interesting ones for further reference. These sessions are recorded on their continued education sheets and included in their competency folders.

Prior to August 2001, whenever a RN placed a PICC she/he would review the location of the PICC's tip with a staff radiologist. There also was required reading of articles on PICC placement and malposition.<sup>1,6</sup> In the course of setting up this program, classes were provided in which the radiologist reviewed many different chest films, pointing out landmarks for the parts of the superior vena cava (SVC) and right atrium and ventricle, and providing examples of imaging showing PICC malpositions, including the dreaded arterially placed PICC. Following such education, a radiology test was taken in which the radiology staff showed many different chest x-rays and individually we had to identify where the PICC tip was.

As a result of this training, our practice at the VA PSHCS has improved. There is a better understanding of the differences in patient anatomy; by looking at previous chest x-rays of line placements, the next line's placement typically is better planned in that patient; we are more consistent in PICC tip placements, and it has let us better initially measure PICC tip placement. Also, when confronted with kinked or looped central lines, we now are better able to correct these problematic lines. It is extremely important for all members of the vascular access team, including nurses, to consider many factors when

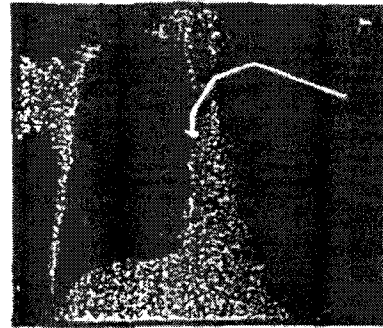


Figure 1  
Position of PICC for which radiology reports that tip is located in the SVC.

inserting or troubleshooting problem central venous lines.<sup>7</sup> Reading chest radiographs for PICC tip placement has helped us improve our practice.

For example, in Figure 1 we see a PICC in which the radiologist's report stated that the PICC was in the SVC. True, it is in the SVC, but is it at a nearly ideal position per recent literature and the NAVAN's position paper on tip position?<sup>2,3,8</sup> The position paper states that the best tip position of peripherally inserted central catheters is the distal part of the superior vena cava or the right caval-atrial junction.<sup>4</sup> Some radiologists or other MDs feel that a right atrium placement of central lines is good, but this is not per current literature.<sup>1,4</sup> The infusion RN needs to take control of where he/she places the PICC line. As vascular access specialists do we not have time to read chest radiographs for PICC tip placement?

By reading chest radiographs for PICC tip placement, the infusion nurse is in a better position to assess their practice, gather data, and make changes. This is part of evidence-based practice.<sup>9</sup> At the Seattle VA, we have been able to adjust our PICC threading techniques for optimal placement. We have documented evidence that shows that leaving a stylet in the catheter of a left-sided placed PICC while shooting a chest x-ray may help not only in seeing the tip but that it also impinges on the right side of the SVC (Figure 2). These observations may not have been possible if we were not viewing chest films. This helps us weigh the risks of our clinical practice.

**TABLE I  
SUMMARY OF THE KEY  
STEPS IN THE DEVELOP-  
MENT OF A PROGRAM**

1. Find out if your state's Board of Nursing will allow you to expand your scope of practice.
2. Approach your facility:
  - a. Nursing
  - b. Radiology
  - c. Chief of Staff
  - d. IV/PICC Team
3. Provide education and training with documentation.
4. Write policy and procedure and have it signed off by appropriate parties.
5. Gain radiologist's/physician's certification
6. Institute quality improvement to document ongoing competency

Education of Vascular Access RNs can lead to better appreciation of chest radiology, better understanding of the variances in vascular anatomy, solutions for catheter-related problems such as kinks, and help in pre-insertion assessment of pre-existing conditions.

In order to have a successful program there are certain responsibilities that must be accepted by a number of different parties (Table I):

**Institution** - the Nursing Executive, Chief of Radiology, and the Chief of Staff must approve of expanding the nurses' scope of practice.

**Radiology** - the radiology department must have a radiologist willing to take responsibility to develop the instructional program, and test and

certify the IV RNs to read chest radiographs for PICC tip placement. The radiologist does not release his or her responsibility for the timely formal readings of the chest radiographs.

**Nurse Manager or Supervisor** - writes the policy and procedure, presents the proposal to radiology, and to the Nurse Practice Committee or Nursing Executive, insures that there is time for classes, keeps up with the ongoing competencies of each of the IV RNs participating and those that are learning, does QI Tracking, and of course, continues educational IV radiology rounds.

**IV Team Staff** - participates in IV radiology rounds, reads related articles, attends class, takes and passes radiology tests, and fills out quality assurance forms with each reading of chest x-rays for PICC tip placement.

### Conclusion

Empowering infusion nurses to read/view chest radiographs for PICC tip placement and then being able to release the PICC for use is a viable option for facilities or agencies across the country. It is essential to know that being certified at one facility to read chest radiographs for PICC tip placement is for that facility alone, it is not state wide. Not only does this enable the infusion nurse to release PICCs in a timely manner for use but also aids in timely repositioning of mal-positioned lines. Once the infusion nurse has become accustomed to viewing many chest radiographs there will be a realization of the differences in anatomies which will aid in measurement prior to PICC inser-



**Figure 2**  
X-ray image showing the styilet and catheter impinging upon the right wall of the superior vena cava (SVC).

tion. It is very important for nurse vascular access specialists to have input in the proper position of central lines.

"With training, education, experiencing, and certification to read chest radiographs for PICC placement, infusion nurses are more highly valued at their facility and better able to effect change." Remember these are your lines. ♥

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