



**Doug Ducey**  
Governor

**Joey Ridenour**  
Executive Director

## **Arizona State Board of Nursing**

4747 N. 7<sup>th</sup> Street, Suite 200  
Phoenix, AZ 85014-3655  
Phone (602) 771-7800 Fax (602) 771-7888  
E-Mail: [arizona@azbn.gov](mailto:arizona@azbn.gov)  
Home Page: [www.azbn.gov](http://www.azbn.gov)

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**OPINION: INTRAVENOUS INFUSION THERAPY  
/VENIPUNCTURE BY LICENSED PRACTICAL  
NURSES**

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**ORIGINATING COMMITTEE:  
SCOPE OF PRACTICE COMMITTEE**

### **ADVISORY OPINION INTRAVENOUS INFUSION THERAPY/VENIPUNCTURE: THE ROLE OF THE LICENSED PRACTICAL NURSE**

This Advisory Opinion has four parts: 1) The basic competencies of all LPN's, 2) Additional skills learned by an organized course of instruction, 3) Education and competency for additional skills, 4) Skills not considered within the scope of a LPN.

The role of the LPN in intravenous infusion therapy is determined and assigned by the RN or Physician.

- I. The following basic competencies are within the scope of practice of all Licensed Practical Nurses provided they have received training and education in their core curriculum or in an organized course of instruction and are validated by the employer as competent.
  - A. Calculation of correct infusion rates for un-medicated and medicated intravenous infusions.
  - B. Regulation of rates for un-medicated IV fluids (e.g.: D5W, saline solution, and Ringers solution).
  - C. Addition of un-medicated and medicated IV solution to existing peripheral-short and peripheral midline, and peripheral inserted central catheters.
  - D. Inspection of IV sites and reporting of signs of complications such as infiltration, infection, or malfunction of the infusion.
  - E. Providing for IV line and site care including: peripheral-short\*, peripheral-midline\*\*, and central IV lines and, catheter site care, which comprises of cap and dressing changes.
  - F. Measuring and recording intake and output related to IV medications, including fluids and irrigations.
  - G. Observation of client's responses to IV therapy, therapeutic nursing interventions, and identifying and reporting adverse reactions.
  - H. Removal of peripheral catheters used for intravenous therapy, including peripheral-short and peripheral midline. Excludes peripheral external jugular catheters and peripherally inserted central catheters.

\*\*Definition of a peripheral-short catheter: According to the Infusion Nursing Standards of Practice (November/December 2006), a peripheral-short is one that is less than or equal to 3 inches (7.5 cm) in length.

\*\*\*Definition of a midline catheter: According to the Infusion Nursing Standards of Practice (November/December 2006), a midline catheter is one that is between 3 inches (7.5 cm) and 8 inches (20 cm) in length and categorized as "peripheral-midline."

- II. If delegated by an RN or Physician, **it is within** the Scope of Practice for a Licensed Practice Nurse to perform the following additional tasks, **AFTER** they have met the requirements specified in section III.
- A. Inserting peripheral-short catheters for infusion (may draw blood immediately post-insertion for laboratory specimens).
  - B. Routine flushes with saline or heparinized saline, and blood draws for peripherally inserted central catheters (PICC)\*\* and central lines. This includes routine flushes with the completion of medication administration.
  - C. Regulation of rates for medicated IV fluids e.g.: Classes of Anti-Infective – Cephalosporin’s, Penicillin’s, Amino glycosides, Fluoroquinolones, and Macrolides; as well as other anti-infective including Clindayccin (Cleocin), Metronidazole (Flagyl), Doxycycline (Vibramycin), Vancomycin, Chloramphenicol (Chloromycetin)\*
  - D. Administer, monitor and discontinue specified premixed/admixture medications into peripheral-short, peripheral-midline, and peripherally inserted central catheters.
    1. Premixed solutions are solutions that are
      - a. mixed, labeled and signed by the pharmacist, OR
      - b. commercially prepared.
    2. Admixture medications are in powder form and attached to a solution ready to be mixed.
    3. A current list of approved solutions and medications will be kept on file by the agency or employer.
  - E. Use ultrasound to gain peripheral access.

\*Due to the rapid development of new pharmacology agents no list of Anti-Infective can be all-inclusive. It is anticipated that this list will expand over time.

List of Anti-Infective are as follows:

Cephalosporin’s – Ceftriaxone (Rocephin), Cefazolin (Kefzol, Ancef), Ceftazidime (Fortaz), Cefdzoxime (Cefizox), Cefoxitin (mefoxin), Cefotetan (Cefotan), Cefotaxime (Ciaforan), Cefamandole (Mandol), Cephapirin (Cefadyl), Cefoperazone (Cefobid), Cefuroxime (Zinacef), Cefonicid (Monocid), Cephalothin (Keflin)

Penicillins – Ampicillin (Omnipen), Piperacillin (Pipracil), Ampicillin/Sulbactam (Unasyn), Nafcillin (Unipen), Ticarcillin/Clavulanate Potassium (Timentin) Piperacillin/Tazobactam (Zosyn), Penicillin G, Aztreonam (Azactam), Imipenem/Cilastatin (Primaxin), Carbenicillin, Mezlocillin (Mezlin)

Aminoglycosides – Amikacin (Amikin), Gentamicin, Tobramycin (Nebcin)

Fluoroquinolones – Ciprofloxacin (Cipro), Ofloxacin (Floxin), Fluconazole (Diflucan)

Macroxides – Erythromycin

\*\*Definition of PICC: a Peripherally Inserted Central Catheter

- III. Licensed Practical Nurses may perform the tasks listed in Section II after they have met the following requirements:
- A. The Licensed Practical Nurse has satisfactorily completed an instructional program on intravenous therapy and medication skills, during their Arizona LPN core curriculum or in an organized course of instruction.
  - B. Practical nurses by endorsement may:
    1. Successfully complete a LPN IV and Medication Skills course of instruction in another state and show evidence of that coursework and;
    2. Demonstrate competency to employer.
  - C. Formal instruction to include, but not limited to:
    1. Anatomy and Physiology of skin and vascular systems.
    2. Client evaluation, equipment (use and malfunctions), and peripheral site selection.
    3. Infection control/Universal precautions/needle safety devices.
    4. Peripheral-short venipuncture technique and discontinuation.
    5. Technique for flushing all types of intravenous lines.

6. Principles of IV therapy, including medication administration, care and maintenance of peripheral-short and peripheral-midline, PICC, and central line catheters.
  7. Fluid and electrolytes/homeostasis.
  8. Complications of IV therapy, local, mechanical and systemic.
  9. Nursing care responsibilities and documentation.
  10. Pharmacology/calculations and nursing implications for selected IV fluids and medications.
  11. Board of nursing statutes/rules/advisory opinion/policies and procedures, including delegation/supervision responsibilities.
- D. Documentation of satisfactory completion of an instructional program, demonstrates competency of C.1-11, and successful venipuncture, and supervised practice is on file with the agency / employer.  
A copy is given to the LPN to be retained as verification of competency. The supervised practice is recommended to include a minimum of 5 successful venipunctures. It is the employer's responsibility to validate the LPN's competency to provide infusion care.
- E. Written policies and procedures are maintained by the agency/employer.
- F. Recommended instructor qualifications: a Registered Nurse with a BSN and a minimum of two years practice in nursing and substantial direct clinical experience in IV therapy.

IV. Skills that are NOT considered within the scope of a LPN.

- A. Administration of:
1. Parental nutrition (PN)
  2. Intralipids
  3. Blood, blood products or plasma expanders
  4. Antineoplastic drugs
  5. Investigative or research medications
  6. Direct IV push except flushes
  7. IV Medications for procedural sedation/anesthesia
  8. Medications which require close RN monitoring, assessment, or interpretation of data, or titration, including but not limited to: Potassium, i.e. greater than 40 meq/1000cc, Amphotericin B (Fungizone), Liposomal Amphotericin, Pentamidine Isothionate, among others. System lytics: thrombolytic, fibrinolytics
  9. IV for contrast
- B. Initiate, program, administer solutions or medications, repair, or remove the following devices:
1. Implanted infusion pumps
  2. Intrathecal, epidural, intraosseous, umbilical, or ventricular reservoirs.
  3. Peripheral external jugular catheter.
- C. Inserting, repairing, or removing arterial and central venous catheters, including PICC lines.
- D. Access/remove a non-coring needle from an implanted subcutaneous port.

**RATIONALE**

To provide the nursing community with guidelines to clarify the LPN's role regarding intravenous therapy and venipuncture.

## REFERENCES

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