V: Infusion Therapy

**Please note:** Competencies within this section of the Profile are to be taken in consideration with competencies outlined throughout this document and are not intended to be standalone.

**Important:** LPNs are responsible to ensure they have any required education or training and the individual competence prior to performing these competencies.
Competency Statement - A Licensed Practical Nurse will:

V-1-1 Demonstrate knowledge of principles of infusion therapy related to:
- circulatory system
  - arterial
  - venous
- blood and blood products
- chemotherapy
- fluid and electrolyte maintenance, restoration, and replacement
- infection prevention and control
- medications and nutritional feedings

V-1-2 Demonstrate knowledge of principles of peripheral lines, central lines, implanted ports, spinals, epidurals, and patient controlled analgesia.

V-1-3 Demonstrate knowledge and ability to manage peripheral intravenous infusion therapy:
- initiate, monitor, regulate, lock discontinue
  - assemble and prime lines
  - calculate infusion rates
  - patient safety
  - infusion equipment
  - administration of fluids and medications
  - treatment evaluation

V-1-4 Demonstrate knowledge and ability to manage patient controlled analgesia pump (PCA pumps):
- regulate, monitor
- lock, discontinue

V-1-5 Demonstrate knowledge and ability to manage complications of peripheral intravenous therapy:
- air emboli
- allergic reactions
- dehydration or hypervolemia
- phlebitis or thrombophlebitis
- equipment problems
- infection
- infiltration or extravasation

V-1-6 Demonstrate knowledge and ability to manage hypodermoclysis infusion:
- initiate, monitor, regulate, lock discontinue
  - assemble and prime lines
  - calculate infusion rates
  - patient safety
  - infusion equipment and pump
  - administration of fluids and medications

V-1-7 Demonstrate knowledge and ability to manage complications of hypodermoclysis infusion:
- allergic reactions
- edema
- equipment problems
- fluid or medication error
- hypervolemia
- infection
- localized pain
- infiltration or extravasation
Competency Statement - A Licensed Practical Nurse will:

**V-2-1** Demonstrate knowledge of central venous catheter (CVC) lines and clinical application:
- tunneled and non-tunneled
- peripheral/percutaneous (PICC)
- subcutaneous port / implanted vascular access device (IVAD)

**V-2-2** Demonstrate knowledge and ability to recognize and manage risks associated with central lines:
- abnormal heart rate or rhythm
- line blockage
- brachial plexus injury
- embolus or thrombus
- faulty or fractured device
- hemorrhage and hematoma
- incorrect placement
- infection and sepsis

**V-2-3** Demonstrate knowledge and ability to recognize and manage risks associated with removal of central venous catheters:
- abnormal heart rate or rhythm
- embolus or thrombus
- brachial plexus injury
- faulty or fractured device
- hemorrhage and hematoma
- infection and sepsis

**V-2-4** Demonstrate knowledge and ability to monitor and manage central lines according to employer requirements:
- dressing changes
- cap and tubing change
- flush and lock
- maintain central venous pressure
- administration of fluids
- administration of medications (continuous, intermittent, direct)
- occlusion issues
- patient controlled analgesia pump (PCA)
- withdraw blood

**V-2-5** Demonstrate knowledge and ability to remove non-tunneled central venous catheters according to employer requirements.
Major Competency
V: Infusion Therapy

Competency
V-3: Blood and Blood Products

Competency Statement - A Licensed Practical Nurse will:

V-3-1 Demonstrate knowledge of the circulatory system and components of blood and blood products used in transfusion therapy.

V-3-2 Demonstrate knowledge of blood typing groups and considerations related to blood cross-matching.

V-3-3 Demonstrate knowledge of normal and abnormal lab values pertaining to blood transfusion.

V-3-4 Demonstrate knowledge of types of transfusions according to composition and clinical indications:
- albumin
- cryoprecipitate
- factor IX and VIII concentrate
- immunoglobulin
- packed red blood cells
- packed white blood cells
- plasma (fresh frozen and single donor)
- platelets
- whole blood

V-3-5 Demonstrate knowledge and ability to obtain informed consent prior to transfusion of blood products, understanding and respecting:
- ethical, cultural, and religious beliefs
- legal right to refuse

V-3-6 Demonstrate knowledge and ability to prepare for infusion of blood and blood products according to employer requirements:
- obtain blood or blood products
- check blood or blood products with another authorized professional
- set up and prime infusion lines

V-3-7 Demonstrate knowledge and ability to monitor, regulate and discontinue blood or blood products.

V-3-8 Demonstrate knowledge and ability to identify and manage a reaction to blood or blood products:
- anaphylaxis
- abdominal pain/nausea
- acute respiratory condition (dyspnea, pulmonary)
- chest, flank or back pain
- circulatory overload
- elevated blood pressure
- embolus
- fever/chills
- altered mental state (anxious, drowsy)
- altered skin color and appearance (urticaria, jaundice)
- urine output and color

Note: Licensed Practical Nurses are not authorized to provide the restricted activity of administering (initiation of) blood or blood products.
Major Competency
V: Infusion Therapy

Competency
V-4: Epidural and Spinal Infusion

Competency Statement - A Licensed Practical Nurse will:

V-4-1 Demonstrate knowledge of epidural and spinal infusion therapy:
- regional anesthesia (pain block)
- infusion rates
- patient safety

V-4-1 Demonstrate knowledge of epidural and spinal infusion therapy:
- infusion equipment
- neurological assessment
- fluids and medications

V-4-2 Demonstrate knowledge and ability to manage problems and complications of epidural and spinal infusion therapy:
- abnormal lab values
- allergic and adverse reactions
- equipment issues, line occlusion or disconnection
- hemorrhage
- fever or infection

V-4-2 Demonstrate knowledge and ability to manage problems and complications of epidural and spinal infusion therapy:
- infiltration
- inadequate analgesia
- respiratory depression
- urinary retention
- hypotension
- post epidural cerebrospinal fluid leak

V-4-3 Demonstrate knowledge and ability to manage patient care following epidural or spinal infusion therapy.

V-4-4 Demonstrate knowledge and ability to monitor and regulate epidural infusions.

Note: Licensed Practical Nurses are not authorized to initiate or remove epidural and spinal catheters.