V: Infusion Therapy
Major Competency Area: V
Infusion Therapy

Priority: One

Competency: V-1
Knowledge of Intravenous Therapy

Date: September 1, 2005

A Licensed Practical Nurse will:

V-1-1 Demonstrate knowledge and ability to apply critical thinking and clinical judgment throughout the intravenous therapy process.

V-1-2 Demonstrate knowledge of human anatomy and physiology, specifically the circulatory system, fluids, and electrolytes.

V-1-3 Demonstrate knowledge of principles of infusion therapy:
- fluid and electrolyte maintenance, restoration and replacement
- medications and nutritional feedings
- blood and blood products
- chemotherapy
- heparin and saline lock.

V-1-4 Demonstrate knowledge of related terminology such as:
- infiltration
- infusion
- interstitial
- intravenous
- hypodermoclysis (HDC)
- phlebotomy
- to be absorbed (TBA)
- to keep vein open (TKVO)
- total parenteral nutrition (TPN).

V-1-5 Demonstrate ability to differentiate between peripheral lines, central lines, implanted ports, and epidurals.
Major Competency Area: V
Infusion Therapy

Priority: One
Restricted Activity Authorization

Competency: V-2
Peripheral Intravenous Therapy

Date: September 1, 2005

A Licensed Practical Nurse will:

V-2-1 **Demonstrate understanding of the restricted activity in the LPN Regulation 2003 (13) authorizing intravenous therapy:**
“(1) Regulated members are authorized, in accordance with this section, to perform the restricted activity of administering anything by invasive procedure on body tissue below the dermis for the purposes of:
(2) …insertion of an apparatus for supplying medications or fluids.”
Health Professions Act LPN Regulation 2003

V-2-2 **Demonstrate knowledge and ability to monitor, maintain, regulate, and evaluate peripheral infusion therapy.**

V-2-3 **Demonstrate knowledge and ability to identify common intravenous solutions according to type of solution, additional contents, and indications for use.**

V-2-4 **Demonstrate knowledge and ability to set-up and prime infusion line.**

V-2-5 **Demonstrate knowledge and ability to use a variety of infusion therapy equipment such as:**
- programmable infusion equipment
- patient controlled analgesia pumps (PCA pumps).

V-2-6 **Demonstrate ability to calculate infusion rates.**
A Licensed Practical Nurse will:

**V-2-7** Demonstrate knowledge and ability to recognize, and respond to, complications of intravenous therapy as related to etiology, clinical manifestations, and preventative nursing measures:
- abnormal lab values
- air emboli
- allergic reactions
- correct fluid / medication
- correct expiry date
- dehydration
- fluid overload
- infection
- infiltration problem
- phlebitis / thrombophlebitis
- safety of client.

**V-2-8** Demonstrate knowledge and ability to resolve common problems associated with peripheral intravenous therapy.

**V-2-9** Demonstrate knowledge and ability to initiate, flush, monitor and discontinue heparin and saline locks in established peripheral infusion sites.

**V-2-10** Demonstrate knowledge and ability to prepare and administer medications for infusion as per medication order. (see Competency Band U)

*Note:* LPNs are not authorized to provide direct peripheral IV push medications.

**V-2-11** Demonstrate knowledge and ability to provide retrograde push medications via peripheral intravenous infusions in specific settings as per agency policy.

**V-2-12** Demonstrate knowledge and ability to monitor and regulate Total Parenteral Nutrition (TPN).

*Note:* LPNs are not authorized to provide the restricted activity of administering (initiation of) TPN.
Major Competency Area: **V**

**Infusion Therapy**

Priority: **One**

Restricted Activity Authorization

Competency: **V-3**

**Initiate and Discontinue Peripheral Infusion**

Date: September 1, 2005

A Licensed Practical Nurse will:

**V-3-1** Demonstrate knowledge of peripheral venous system.

**V-3-2** Demonstrate knowledge and ability to identify common IV puncture sites.

**V-3-3** Demonstrate knowledge and ability to initiate peripheral infusion line upon physician / nurse practitioner order and agency policy.

**V-3-4** Demonstrate ability to discontinue peripheral infusion and remove infusion catheter.
Major Competency Area: V
Infusion Therapy

Priority: One
Restricted Activity Authorization

Competency: V-4
Care of a Central Line

Date: September 1, 2005

A Licensed Practical Nurse will:

V-4-1 Demonstrate ability to apply critical thinking and clinical judgment throughout the nursing process when caring for client with a central line.

V-4-2 Demonstrate knowledge of different types of central lines and the terminology used by the agency such as:
- central venous catheter (CVC):
  - implanted
  - non-valved or open ended
  - midline catheter (not a CVC)
  - percutaneous
  - peripherally inserted central catheter (PICC)
  - tunneled
  - valved or closed ended.

V-4-3 Demonstrate knowledge of risks associated with central lines such as:
- abnormal heart rhythm
- air in bloodstream
- bleeding around site and into chest
- blockage (blood clots)
- brachial plexus injury
- incorrect placement
- sepsis.

V-4-4 Demonstrate knowledge and ability to provide basic care to a client with a central line as per agency policy:
- dressing change.

V-4-5 Demonstrate ability to monitor the central line infusion.
Major Competency Area: V

Infusion Therapy

Priority: One

Restricted Activity Authorization

Competency: V-5

Care of a Central Line in Specific Settings

Date: September 1, 2005

A Licensed Practical Nurse will:

V-5-1 Demonstrate knowledge and ability to provide additional care to a client with a central line as per agency policy:
- cap / tubing change
- flush
- heparin/saline locks
- withdraw blood
- administration of fluids and medications as appropriate.

V-5-2 Demonstrate knowledge and ability to maintain central venous pressure while providing care of the central line.

Note: LPNs providing additional care of central lines have been trained through specific on the job certification and are practicing in the Community or the Dialysis Specialty.
Major Competency Area: **V**

**Infusion Therapy**

Priority: **One**

**Restricted Activity Authorization**

Competency: **V-6**

**Hypodermoclysis**

Date: September 1, 2005

A Licensed Practical Nurse will:

**V-6-1** Demonstrate knowledge of human anatomy and physiology, specifically the circulatory system.

**V-6-2** Demonstrate knowledge and ability to recognize the purpose of hypodermoclysis:
- replacement of electrolytes
- correct fluid imbalance
- symptom control
- administer several drugs simultaneously utilizing several sites
- when other routes are no longer available or appropriate
- continuous medication administration
- pain management.

**V-6-3** Demonstrate knowledge of appropriate site:
- upper chest wall
- abdominal wall
- anterolateral thigh.

**V-6-4** Demonstrate ability to initiate hypodermoclysis infusion.

**V-6-5** Demonstrate ability to provide medications and fluids via hypodermoclysis (See Competency Band U).

**V-6-6** Demonstrate knowledge and ability to monitor, maintain, regulate, and evaluate hypodermoclysis infusion.
A Licensed Practical Nurse will:

V-6-7 Demonstrate knowledge and ability to identify and describe complications of hypodermoclysis related to etiology and clinical manifestation:
- allergy
- infection
- lack of absorption.

V-6-8 Demonstrate knowledge and ability to discontinue hypodermoclysis.

V-6-9 Demonstrate ability to document hypodermoclysis therapy.

V-6-10 Demonstrate knowledge of agency policies pertaining to hypodermoclysis therapy.
Major Competency Area: Infusion Therapy

Competency: Blood Transfusion

Priority: One

Date: September 1, 2005

A Licensed Practical Nurse will:

V-7-1 Demonstrate knowledge of circulatory system and components of blood and blood products.

V-7-2 Demonstrate knowledge and ability to use standard precautions.

V-7-3 Demonstrate knowledge of normal lab values pertaining to blood transfusion.

V-7-4 Demonstrate knowledge of common transfusions according to composition and indications for use:
  - cryoprecipitate
  - fresh frozen plasma
  - packed red blood cells
  - packed white blood cells
  - platelets
  - plasma expanders
  - whole blood.

V-7-5 Demonstrate knowledge of blood typing and cross-matching of blood.

V-7-6 Demonstrate knowledge and awareness of the ethical and religious beliefs regarding blood transfusions.

V-7-7 Demonstrate knowledge and understanding of client’s legal right to refuse blood or blood products.

V-7-8 Demonstrate knowledge and ability to set up for blood administration.

V-7-9 Demonstrate knowledge and ability to obtain blood or blood products from blood bank as per agency policy.
A Licensed Practical Nurse will:

V-7-10 Demonstrate knowledge and ability to participate with an appropriate health professional to check patient identification with label on blood or blood product.

V-7-11 Demonstrate knowledge and ability to monitor and regulate administration of blood or blood products.

Note: LPNs are not authorized to provide the restricted activity of administering (initiation of) blood or blood products.

V-7-12 Demonstrate knowledge and ability to recognize a reaction to blood or blood products and change blood infusion to normal saline:
- fever
- chills
- rash
- flank pain or back pain
- bloody urine
- fainting or dizziness.

V-7-13 Demonstrate knowledge and ability to discontinue blood transfusion.

V-7-14 Demonstrate knowledge and ability to monitor and evaluate therapeutic and non-therapeutic responses to blood transfusion.

V-7-15 Demonstrate ability to effectively document information regarding transfusion therapy.

V-7-16 Demonstrate knowledge of agency policies pertaining to blood transfusions.