

# **AA: Hemodialysis Specialized Area of Practice**

Major Competency Area: **AA**  
**Hemodialysis Specialized Area of Practice**

View the [Specialized Areas of Practice Practice Guideline](#) for more information.

Competency: **AA -1**  
**Critical Thinking and Clinical  
Judgment in the Hemodialysis  
Nursing Role**

Date: June 25, 2015

A Licensed Practical Nurse will:

**AA-1-1 Demonstrate knowledge of human anatomy and physiology**

**AA-1-2 Demonstrate knowledge of pathophysiology, symptoms, treatment, and interventions of acute and chronic renal failure:**

- Disruption to kidney function
- Normal structure and physiology
- Identify multi system failure related to kidney disease
- Principles of dialysis - osmosis, diffusion, ultra-filtration
- Symptoms related to inadequate dialysis
- Treatments related to:
  - Peritoneal dialysis
  - Hemodialysis
  - Transplant preparation
  - Diet and fluid restrictions
  - Sodium, potassium, calcium and phosphorous restrictions

**AA-1-3 Demonstrate knowledge and ability to assess for hemodialysis complications and nursing interventions including but not limited to:**

- Hypoxemia
- Exsanguination
- Dialyzer reactions
- Air embolism
- Muscle cramps
- Hypotension/Hypertension
- Chest Pain
- Dysrhythmias
- Acute hemolysis
- Blood glucose levels
- Edema
- Ischemic feet
- Lab values
- Psychosocial assessment
- Need for dietary consult

Competency: **AA-1**

**Critical thinking and clinical judgment  
in the hemodialysis nursing role.**

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**AA-1-3 Demonstrate knowledge and ability to assess for hemodialysis complications and nursing interventions including but not limited to (con't):**

- Interdialytic weight gains
- Disequilibrium reaction
- Pyrogenic reaction
- Dialysis Encephalopathy
- Advanced Health Care Directives

Major Competency Area: **AA**  
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Competency: **AA-2**  
**Critical thinking and clinical  
judgment of the dialysis client**

Date: June 25, 2015

A Licensed Practical Nurse will:

**AA-2-1 Demonstrate knowledge and assessment of the access for evidence of:**

- Stenosis/Vascular conditions
- Arteriovenous fistula, graft, CVC access
- Needle placement
- Needle manipulation
- Understand physiology/complexity/care and potential complications of vascular access
- Flow
- Presence of fistula, graft or central line
- Presence of bruit
- Clotting
- Palpate for thrill
- Aneurysm
- Infection
- Knowledge of clients medications – purpose, frequency, side effects, and correct infusion and administration procedures

**AA-2-2 Demonstrate ability to create an atmosphere that is conducive to patient comfort needs:**

- Observe and report client's physical and emotional condition and take appropriate action
- Sensitive, diplomatic, empathetic manner

**AA-2-3 Demonstrate ability to apply nursing process to the care of the dialysis client including but not limited to**

- Pre-assessment
- Mid-assessment
- Post-assessment

Competency: AA-2

**Critical thinking and clinical judgment  
of the dialysis client**

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**AA-2-4 Demonstrate knowledge and ability to provide medications in the dialysis environment, as per agency policy:**

- Understand pharmacology related to those with renal disease

**AA-2-5 Demonstrate ability to document nursing assessment, treatments, effects, and outcomes and evaluation.**

**AA-2-6 Demonstrate ability to provide health teaching to client and family throughout the process.**

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Competency: **AA -3**  
**Initiation, monitoring and  
discontinuation of dialysis treatment**

Date: June 25, 2015

A Licensed Practical Nurse will:

**AA-3-1 Demonstrate critical thinking and clinical judgment relating to the initiation, monitoring and discontinuation of dialysis treatment in each of the following competencies:**

- Auscultate lungs PRN
- Needle site selection
- Cannulation techniques
- Securing needle
- Cannulation problem solving
- Removal of needle
- Discharge dressing and assessment
- Recognize excessive weight gain and know limitations for fluid removal
- Calculate and adjust fluid removal
- Assess and correct access difficulties
- Assess needling problem
- Maintain medical asepsis
- Draw blood from access sites – collect, label, send specimens
- Monitor vital signs
- Respond appropriately to emergency situations
- Control bleeding from patient's access site
- Note clotting time
- Document and report to appropriate health care team member

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Competency: **AA-4**  
**Understanding the mechanics of  
dialysis and related equipment**

Date: June 25, 2015

A Licensed Practical Nurse will:

**AA-4-1 Demonstrate knowledge and ability to understand the mechanics of dialysis and related equipment:**

- Assess equipment and function, organize repairs and maintenance as required
- H<sub>2</sub>O treatment
- Conductivity and pH meters
- Glucometers
- Assemble or assist with assembling equipment, including hemodialysis machines
- Recognize alarm conditions
- Order supplies as necessary
- Adhere to safety and infection control measures
- Components of hemodialysis system - containments and consequences
- Cleaning of the dialysis machine

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