



Hemodialysis Care: Specialized Area of LPN Practice

Introduction:

Section 21.3(1) of the SALPN Regulatory Bylaws classifies “hemodialysis care” as a specialized area of practice. It is defined as “the provision of practical nursing care related to hemodialysis.”

Licensed Practical Nurses in the hemodialysis care specialized area are prepared with advanced education in the care of patients receiving hemodialysis. The LPN will have the knowledge to perform competently and to utilize critical thinking and clinical judgment in decision-making related to kidney disease.

Background:

Section 21.3 of the SALPN Regulatory Bylaws provides as follows:

21.3(1) In this section, “hemodialysis care” includes the provision of practical nursing care related to hemodialysis.

(2) No member shall provide hemodialysis care unless the member: (a)

has successfully completed:

(i)) prior to January 1, 2016 a post-basic education program that was recognized by council; or

(ii) on or after January 1, 2016, the formal post-basic theoretical education certificate program, known as the “Care of the Patient with Kidney Disease” from the Saskatchewan Polytechnic, or an equivalent program recognized by council, together with clinical experience obtained through a practical program provided by an employer and recognized by council;

(b)) is registered with the SALPN as qualified to provide hemodialysis care; and

(c) practises pursuant to an order of an authorized professional and in collaboration with other members of the health care team.

An LPN who performs hemodialysis care without having acquired the necessary education, being registered as qualified with the SALPN or without the direction or order of an authorized professional, or non-collaboratively would be in breach of the bylaws and therefore guilty of professional misconduct as defined in section 24 of *The Licensed Practical Nurses Act, 2000*.

Program Recognition and Registration with the SALPN

1. On or after May 1st, 2015, on proof of completion of the “Care of the Patient with Kidney Disease” theoretical course from Saskatchewan Polytechnic, together with clinical experience obtained through a practical program provided by an employer, the SALPN will register the LPN as educated in the hemodialysis specialized area of LPN practice.
2. Prior to May 1st, 2015, on proof of completion of an education program recognized by council.
3. An LPN who has completed an equivalent educational program that provides the LPN with the competencies required to practice hemodialysis care can apply to Council for recognition of the program. Once Council recognizes the program, the SALPN will register the LPN as educated in the hemodialysis specialized area of LPN practice.

Practice Guideline:

1. LPNs may provide hemodialysis care to a variety of patients in care settings offering hemodialysis treatment. LPN's who perform peritoneal dialysis are **not** required to obtain the hemodialysis certification. Peritoneal dialysis is an additional LPN competency requiring informal, post basic education.
2. The LPN who provides hemodialysis care requires an order from an authorized professional in order to implement the medical treatments entailed within this specialty area.
3. The LPN who provides hemodialysis care must work in collaboration with other members of the health care team.
4. The LPN who provides hemodialysis care must work in collaboration with other members of the health care team and ensure the appropriate health professional is consulted when the required care needs of the patient exceed the competence of the LPN provider.

Competencies:

SALPN recognizes education that encompasses the following:

1. Demonstrate knowledge and ability to apply critical thinking and clinical judgment in the hemodialysis nursing role.

- Demonstrate knowledge of human anatomy and physiology
- 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
- 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
 - Interdialytic weight gains
 - Disequilibrium reaction
 - Pyrogenic reaction
 - Dialysis Encephalopathy
 - Advanced Health Care Directives

- Demonstrate knowledge and ability to apply standard precautions, WHMIS Regulations, and principles of asepsis in hemodialysis nursing.

2. Demonstrate critical thinking and clinical judgment relating to the assessment and nursing care of the dialysis client in each of the following competencies.

- 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
- 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
- Demonstrate ability to apply nursing process to the care of the dialysis client including but not limited to
 - Pre-assessment
 - Mid-assessment
 - Post-assessment
- Demonstrate knowledge and ability to provide medications in the dialysis environment, as per agency policy
 - Understand pharmacology related to those with renal disease
- Demonstrate ability to document nursing assessment, treatments, effects, and outcomes and evaluation
- Demonstrate ability to provide health teaching to client and family throughout the process

3. 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 problems
- 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

4. Demonstrate knowledge and ability to understand the mechanics of dialysis and related equipment:

- Assess equipment and function, organize repairs and maintenance as required
- H₂O 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

References:

Canadian Council of Nurse Regulators. (2013). *Code of Ethics and Standards of Practice for Licensed Practical Nurses in Canada*. CCPNR.

Canadian Council of Practical Nurse Regulators. (2013). *Entry-to-Practice Competencies for Licensed Practical Nurses*. CCPNR.

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