

## **DECLARATORY STATEMENT ON THE ROLE AND SCOPE OF PRACTICE OF THE REGISTERED NURSE IN DIALYSIS NURSING IN RENAL DIALYSIS CENTERS AND FACILITIES**

### Preamble

The Louisiana State Board of Nursing believes that, in order to be responsive to the needs and safeguard the life and health of dialysis patients, registered nurses must be accountable and responsible for the assessment, planning, intervention, teaching, supervision, and evaluation of care to ensure that the patient will receive a safe and effective hemodialysis treatment according to the prescribed treatment plan and in accordance with LAC 46:XLVII. 3901-3913. Risks are inherent in the hemodialysis process as identified by the Department of Health and Hospitals (DHH) LAC 46:1.2438, 2440, 2442, and 2444 and when the parameters for confirming adequate dialysis are compromised (ERSD Network 13, 1996).

### Authority

Pursuant to L.R.S. 49:963 and LAC 46:XLVII.3321, the Board of Nursing is authorized to issue declaratory statements in response to requests for clarification of the effect of rules and regulations or of L.R.S. 37:911 et seq. as re-enacted and amended, 1995.

### Process

On February 2, 1996 the Task Force on the Role and Scope of Practice in Dialysis Nursing convened to review letters of concern regarding current practices in hemodialysis, letters of request for an opinion, previous Board opinions relative to dialysis nursing and to develop a declaratory statement regarding the delegation of hemodialysis functions to LPNs and dialysis technicians particularly regarding cannulation, initiating of dialysis, and the administration of medications in a dialysis unit or clinic and in the acute care setting, that is responsive to the needs in Louisiana.

After due deliberation, the Task Force members identified the following salient points relative to hemodialysis nursing:

- ◆ Areas of concern addressed in writing to the Board are relative to the accountability of a registered nurse in the acute care setting who is not competent in dialysis functions, the lack of technician preparation, the role of the LPN, and the staffing ratios of registered nurses to patients and technicians in a renal dialysis facility.
- ◆ Other areas of concern addressed by the Task Force members are relative to the quality of care issues, mortality rates, facility compliance with HFCA standards, and delegation of functions to technicians as it relates to the national adequacy of hemodialysis standard:  $Kt/VD = 1.2$  (URR>65%).
- ◆ Mortality statistics for ERSD dialysis patients in 1994 were 21% for National and 19% in Louisiana; however, 1995 statistics show ERSD Network 13, which includes Louisiana, as having the lowest degree of dialysis adequacy, less than a 40% mean URR>0.65.
- ◆ Since 1974, technicians and LPNs have been performing the technical skills of accessing a graft (cannulating and initiating dialysis) in renal dialysis facilities.
- ◆ There are inconsistencies regarding the training and in some cases, practice of LPNs and dialysis technicians in renal dialysis facilities.

- ◆ In Louisiana there are no set guidelines for training dialysis technicians or for verifying competency, monitoring, and reevaluation.
- ◆ There are varying levels of delegated functions to LPNs and technicians:
  - in some facilities LPNs and technicians are only administering Heparin and Saline;
  - in other situations the LPNs and technicians are administering Epogen and Calcijex (one facility limits medication administration to LPNs injecting the drugs into the machine versus the patient);
  - in some areas technicians are accessing grafts only, and in other areas they are accessing permacaths and central line catheters.
- ◆ There are two distinct situations that need to be addressed:
  - acute care settings with LPNs initiating and performing dialysis;
  - chronic care settings (renal dialysis facility), which have registered nurses present with a consistent ration of 4:1, but with inconsistencies in the type of personnel and delegated functions.
- ◆ There is a high turnover rate for registered nurses in the chronic setting. In 38 reporting facilities the average years of service for the registered nurse is 2.7 years compared with 4.5 years of service for technicians.

The Task Force members identified the following areas of agreement:

- ◆ Delegation in the acute setting must be done by a registered nurse trained in dialysis. In order to safely delegate to an LPN, appropriate supervision must be available, in-house, throughout the dialysis procedure in accord with LAC 46:XLVII. §3703.A.10. and 12.
- ◆ There is a shortage of registered nurses competent in dialysis nursing.
- ◆ There are no set educational standards regulating dialysis training in Louisiana facilities.
- ◆ Pertinent data relative to patient safety ( $Kt/V_D = 1.2$  (URR > 65%), common practices, education, and staffing ratios should be considered in the Board's response.
- ◆ It is routine practice for the LPNs and technicians to administer Saline and Heparin into the dialysis machine.

#### Board's Response

After due deliberation and in accordance with L.R.S. 37:911 et seq. as re-enacted and amended, 1995 the Board took the following actions on November 20, 1996 in order to safeguard the life and health of hemodialysis patients.

The Board believes that every patient requiring hemodialysis has the right to professional nursing care. The registered nurse is responsible for the nature and quality of all nursing care a patient receives in accordance with LAC 46:XLVII. 3701-3703 and 39011-3913 regardless of the dialysis setting. The nursing care of dialysis patients shall be supervised by a registered nurse who has training, experience, and documented current competence in the nursing care of patients with renal and end-stage disease and in hemodialysis techniques.

The Board continues to recognize that upon assessment, a registered nurse may delegate to an LPN or dialysis technician the functions of administering Saline and Heparin into a dialysis machine in a renal dialysis facility; the registered nurse may delegate to an LPN and dialysis technician the accessing of a graft by cannulating and initiating dialysis where the registered nurse is readily available for immediate supervision and providing that the said LPN and dialysis technician has the necessary knowledge, skill, and abilities as documented by:

- 1) Dialysis training and orientation reflecting the American Nephrology Nurses' Association (ANNA) standards of clinical practice and in compliance with HFCA regulations, including but not limited to:
  - A. Anatomy and physiology of the renal system.
  - B. Principles of water treatment.
  - C. Dialyzer reprocessing.
  - D. Basics of Nutrition in renal failure.
  - E. Understanding of ethical issues impacting on nephrology practice.
  - F. Communication and interpersonal skills.
  - G. Standard Precautions, as recommended by the Center For Disease Control.
  - H. Concepts and principles of hemodialysis.
  - I. Arteriovenous puncture for dialysis access techniques.
  - J. Use of Heparin in dialysis procedures.
  - K. Use of isotonic saline in dialysis.
  - L. Maintenance of the delivery system: integrity of extracorporeal circuit, pressure monitor readings, anticoagulant delivery, blood flow rate, alarm limits and/or conditions.
  - M. Observation and reports of complications to the registered nurse.
  - N. Post-treatment access care guidelines.
  - O. Disposal of supplies in compliance with Standard Precautions.
  - P. Agency policy in regarding terminal cleaning of equipment and treatment area.
- 2) Training with an assigned preceptor deemed competent by a registered nurse.
- 3) Final initial verification of cannulating skills by a registered nurse and with the registered nurse validating skills biannually.

Any nurse caring for a patient with contract dialysis must have a skilled, competent, registered nurse to assess the patient and either perform the dialysis or delegate the function to a competent LPN provided the said registered nurse is in-house during the initiation and performance of dialysis and is readily available in accord with LAC 46:XLVII. §3703.A.10.c. Accessing, initiating, and terminating *dialysis treatment* by double-lumen permacaths and central line catheters in in-patient acute care settings are non-delegable functions. The administration of Epogen and Calcijex are non-delegable functions in accord with LAC 46:XLVII. §3703. A.12 . Furthermore, in dialysis settings the registered nurse must adhere to the rules and regulations on the delegation of nursing function relative to the administration of intravenous medications and fluids as set forth in LAC 46:XLVII. 4101-4111.

### ***OUT-PATIENT, CHRONIC DIALYSIS***

*In out-patient, chronic dialysis centers, the registered nurse may delegate to the LPN or the Certified Clinical Hemodialysis Technicians accessing, initiating, and terminating dialysis treatment by double -lumen permcaths and central line catheters provided the registered nurse has assessed the patient and monitors the patient during the dialysis treatment and evaluates the outcomes of the treatment, and, the said LPN or Certified Clinical Hemodialysis Technician has documented to her file the training and orientation stated above and the following training listed below specific to double-lumen permcaths and central line catheters:*

- 1) *Central Venous Catheters:*
  - A. *Types of central venous catheters*
  - B. *Initiating Dialysis with a Catheter*
    1. *Inspect for infection*
    2. *Disinfect catheter ports*
    3. *Verify catheter patency*
    4. *Administer the heparin prime (loading dose)*
    5. *Secure the catheter connectors*

6. Draw predialysis blood samples
7. Initiate dialysis
8. Discontinue dialysis
9. Teach patient catheter care
- C. Dialysis-Related Complications of Catheters
  1. Catheter dislodgement or removal
  2. Air embolism
  3. Infiltration/hematoma
  4. Bleeding during hemodialysis
  5. Recirculation
- D. Long-Term Complications of Catheters
  1. Central venous stenosis
- 2) Clinical Training with an assigned registered nurse
- 3) Verification of accessing, initiating and terminating dialysis treatment skills by a registered nurse and with the registered nurse validating skills biannually

*The Board of Nursing recognizes that all forms of vascular access involve some compromise and have complications. Although accessing central lines devices is a technical skill that maybe delegated to another trained licensed nursing personnel; the registered nurse must retain the accountability for managing and supervising the care of the dialysis patient. The registered nurse must track the outcomes of dialysis and if the data shows that the patients are not receiving adequate dialysis treatments, the registered nurse may no longer delegate the nursing intervention of accessing, initiating and terminating dialysis treatments by double lumen permacaths and central line catheters to LPNs. According to AMGEN (2001) vascular access problems are costly; access complications take up staff time, disrupt schedules, and result in lost revenue while patients are in the hospital instead of the dialysis chair. The National Kidney Foundation called the Kidney Disease Outcomes Quality Initiative (K/DOQI) guidelines recommend that the AV fistulae is the preferred and first form of access for most patients and limiting the use of subclavian vein placement for temporary catheters, because this practice causes high rates of central venous stenosis (AMGEN, 2001).*

*On October 14, 2010 CMS implemented the requirement for dialysis technicians to obtain national certification within 18 months of initial employment. The development of effective training programs, required skills validations, continuing education requirements, and standardized certification have greatly improved the knowledge and skills of dialysis technicians.*

#### Definition of Terms for the Purpose of this Document

**End-Stage Renal Disease (ESRD)**---"That stage of renal impairment that appears irreversible and permanent, and requires a regular course of dialysis or kidney transplant to maintain life"(Medicare Regulations §405.2102).

**Agreement**---"A written document, executed between an ERSD facility and another facility in which the other facility agrees to assume responsibility for furnishing specified services for patients and for obtaining reimbursement for those services"(Medicare Regulations §405.2102).

**Arrangement**---"A written document executed between an ESRD facility and another facility in which the other facility agrees to furnish specified services to patients but the ERSD facility retains responsibility for those services and for obtaining reimbursement for them"(Medicare Regulations §405.2102).

**Hemodialysis**---"A process by which dissolved substances are removed from a patient's body by diffusion from one fluid compartment to another across a semipermeable membrane"(Medicare Regulations §405.2102).

**Renal dialysis center**---"A hospital unit which is approved to furnish the full spectrum of diagnostic, therapeutic, and rehabilitative services required for the care of ESRD dialysis patients (including inpatient dialysis furnished directly or under agreement). A hospital need not provide renal transplantation to qualify as a renal dialysis center" (Medicare Regulations §405.2102(2)).

**Renal dialysis facility**---"A unit which is approved to furnish dialysis service(s) directly to ESRD patients" (Medicare Regulations §405.2102(3)).

**Dialysis service - Inpatient dialysis**---"Dialysis which because of medical necessity is furnished to an ESRD patient on a temporary inpatient basis in a hospital"(Medicare Regulations §405.2102(2)(i).

**Dialysis Technician**---"Perform routine procedures in the outpatient, inpatient, and acute settings under the direction and approval of the Medical Director or his/her designee" (NANT).

**Supervised, immediate supervision, readily available**---"The registered nurse is physically present in the patient's room or on the floor with the patient, or in the dialysis unit".

### Concluding Statement

The Board believes that dialysis nursing is more than a technical skill or procedure; it requires the appropriate assessment, planning, intervention and evaluation skills of a registered nurse with special knowledge and competency in dialysis nursing. Since rapid shifts in volume or electrolytes during hemodialysis may result in hemodynamic compromise (hypovolemia, angina, or dysrhythmias) the registered nurse must supervise the performance and documentation of the delegated task and adequacy of the hemodialysis standard to ensure effective and quality patient care.

### Sources:

- Medical Education Institute (2017). Core Curriculum for the Dialysis Technician,6<sup>th</sup> Edition
- Federal Regulations .(2010) CFR42CUR405,410,413 et al. 271-275.
- AMGEN (2001). Core Curriculum for the Dialysis Technician, 2<sup>nd</sup> ed. AMGEN.
- Etheredge, E. (1996). ESRD Network 13. Memorandum relative to Adequacy of Hemodialysis Standard.
- American Nephrology Nurses' Association. (1993). Standards of Clinical Practice for Nephrology Nursing. New Jersey: Anthony J. Jannetti, Inc.
- Dunn, S. (1993). How to care for the dialysis patient. AJN. (6):26-34.
- Renal Physicians Association Working Committee on Clinical Practice Guidelines.. (1993). Clinical Practice Guidelines on Adequacy of Hemodialysis. Clinical Practice Guideline, Number 1. Washington D.C.
- Federal Regulations. CFR42CUR 405.2164-2135.
- Louisiana State Board of Nursing. Previous related opinions.
- National Association of Nephrology Technicians/Technologists Compendium of position papers, standards and scope of practice.