

ROLES AND RESPONSIBILITIES OF RENAL TECHNICIANS

Renal technicians perform dialysis for renal patients with both acute and chronic renal failure. They provide care associated with dialysis, and contribute to training for patients who are undertaking their own dialysis.

They also monitor and maintain haemodialysis machines and related machinery such as water purification systems.

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1. Purpose

This document defines the authorised scope of the role of the renal technicians at a specific District Health Board. The role described here may have different titles in different DHBs, all encompassing clinical functions with patients, as opposed to a technician whose functions relate solely to installing and maintaining dialysis machines.

This document has been developed by the New Zealand Board of Dialysis Practice and endorsed by the National Renal Advisory Board.

This base document includes the full range of activities undertaken by renal technicians in New Zealand. Each DHB will modify, it, deleting or adding any activities according to its own needs, practice and governance.

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2. Training and Certification required to practice

The renal technician must complete the following dialysis training and associated clinical training.

a. Training in dialysis practice

- Completion of training course approved by the New Zealand Board of Dialysis Practice (NZBDP) and internship
- Pass in BONENT examination/ any other NZBDP approved dialysis certification exam
- Maintain current Annual Practising Certificate with NZBDP
- Undertake local DHB training and review of clinical skills as required.

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b. Associated clinical training

- Completion of approved Resuscitation training course
- Completion of IV certification
- Infection control training
- Health & Safety training
- Patient Restraint training
- Emergency & Disaster management
- Lifting and Handling training
- Code of Rights
- Clinical IT Applications
- Tikanga Best Practice

c. Applicable Legislation

Renal technicians need to understand their responsibilities under the following legislation:

- Code of Health and Disability Services Consumer Rights
- Medicines Act
- Privacy Act

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d. Relationship to dialysis nurses

Renal technicians commonly work alongside nurses who also dialyse patients. Nurses are not responsible for the work of trained and certified renal technicians who are independent health professionals.

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3. Renal technician's scope of practice

Renal technicians undertake dialysis for renal patients, provide care associated with dialysis, and contribute to training for patients undertaking their own dialysis.

Renal Technicians complete their training, work book and competency audits to be competent as appropriate for the following activities.

All of the following clinical and technical actions listed are undertaken according to local DHB Department of Renal Medicine protocols.

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a. Haemodialysis (HD) core clinical skills

- Assessment and monitoring pre HD
- Carrying out diagnostic tests as prescribed (biochemistry, Haematology, microbiology & virology), and following up results
- Commencement of HD via all types of access; Temporary catheter, Tunneled line, AV Fistula (AVF) and AV Grafts (AVG) cannulation
- Completing HD treatment as prescribed and implementing changes as directed by the medical team
- HD treatment, including low flux dialysis, Hi flux dialysis, online Hemodiafiltration (HDF)
- Assessment, monitoring and management of complications intra-dialysis according to protocols
- Assessment and monitoring post HD
- Performing HD access assessment, monitoring and management, adequacy of dialysis and recirculation assessment
- Assessing dressings and perform dressing changes related to HD

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- Performing HD appropriately in chronic / dependent and satellite settings
- Ability to assess HD patient's clinical needs and when needs are outside scopes of renal technician care, then referring to appropriate health professionals of MDT.

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b. HD advanced clinical Skills

- Performing Haemodialysis (low flux/ High Flux/Online HDF) appropriately in acute, critical care, paediatric, patient training environments
- Use and monitoring of new needled access, AVF/ AVG
- Training and case management of home patients.

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c. Specialised clinical training in HD related procedures

These procedures require specific certification from the educator in haemodialysis at the local DHB:

- Plasmaphoresis
- Haemoperfusion
- High Cut off (Free Light chains) Dialysis
- Tunnelled line Repair Kit change

d. HD core technical skills

The renal technician's practice involves the following technical skills.

- Ability to competently use all types of dialysis machines used in renal services, perform preventative maintenance and minor technical trouble shooting, machine disinfection and cleaning
- Ability to perform water quality monitoring tests (such as Hardness and Chlorine), filter change etc
- Central RO system: chemical disinfection, water sampling, periodic water treatment plant monitoring, testing and documentation
- Portable RO: Use and operation, filter changes, chemical disinfection, trouble shooting. Water quality testing and monitoring
- Testing, monitoring and operation of essential equipment associated with dialysis: Automated External Defibrillator, Oxygen and suction, Glucometer, Activated clotting time Monitoring machine & Drug fridge.

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e. HD advanced technical Skills

- Endotoxin testing and use of Endo safe
- Emergency bypass of Central RO
- Water sampling for online substitute fluid
- Central RO and HDF machine baseline programming

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f. Peritoneal dialysis (PD) core clinical skills

- Assessment and monitoring pre dialysis
- PD bag changes
- Carrying out diagnostic tests as prescribed (biochemistry, Haematology, microbiology & virology), and following up
- Peritonitis management according to protocols
- Peritoneal dialysis catheter care according to protocols
- Automated PD machine setup, operation and troubleshooting
- Ability to assess when patient's needs and when needs are outside scopes of dialysis technician care, then referring to appropriate health professionals of MDT.

g. PD advanced clinical skills

- Tenckhoff line decontamination and repairs
- Performing and interpreting PD adequacy tests
- Recognition and management of extra peritoneal leaks
- Training and case management of home PD patients.

h. Behavioural competencies

The renal technician will:

- Provide culturally appropriate care by understanding the client and family/whanau's cultural needs
- Recognise and value the role of all members of healthcare team in the delivery of care
- Maintain professional boundaries, responds to patients with appropriate behaviour and in a therapeutic manner
- Treat patients and family/Whanau with courtesy, respect & compassion in care decision making
- Demonstrate confidence in own practice, maintaining trust of the patient and their family/Whanau

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4. Fluids and medications administered in dialysis practice

The renal technician completes and maintains IV certification in order to administer fluids, medicines and blood products with dialysis. All medications administered as prescribed according to the local DHB or Department of Renal Medicine protocol.

Below are listed fluids and medications renal technicians commonly administer as part of or in association with dialysis procedures. Renal technicians may administer other medications in their individual DHBs according to their local protocols.

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a. Intravenous(IV)/ Intra dermal (ID)/ Subcutaneous (SC)/ Intraperitoneal (IP)

The following fluids and medications are administered as part of HD procedures:

- IV Normal Saline – in HD for treating hypotension/cramps and priming of extracorporeal circuit for flushes in heparin free dialysis
- IV Anticoagulants such as Heparin – in HD, anticoagulating the extracorporeal circuit through bolus and infusion doses to prevent the circuit from clotting, and to lock central venous catheters
- ID Xylocaine 1%- (ID) – In HD used prior to cannulation
- IV Glucose- in HD to treat Hypoglycaemia

The following medications are administered as part of HD and PD procedures, after checking with another IV certified health professional:

- IV/SC Erythropoietin – in HD/PD for anaemia management
- IV Iron Polymaltose / Iron Sucrose – in HD for Iron deficiency
- IV Antibiotics such as Gentamicin – in HD to lock central venous catheters, in PD to treat peritonitis
- IV Antithrombolytics such as Urokinase- in HD for CVC dysfunction.

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b. Oral

The following oral renal medications are administered independently by renal technicians in association with the Haemodialysis procedure as prescribed:

- Paracetamol
- Multivitamin
- Folic Acid
- Calcitriol
- Calcium carbonate.

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c. Blood Products

The following blood products are administered by renal technicians in association with the Haemodialysis procedure, after a checking procedure in accord with DHB policy:

- Red blood cells
- Albumin
- Fresh frozen plasma
- Platelets

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5. Communication

The renal technician in their practice:

- Works with the multidisciplinary team members; renal doctors, nurses, dieticians, social worker, physio therapist, occupational therapist, clinical psychologist, primary Health/Community health team members - referring and consulting as appropriate
- Collaborates with renal nursing staff in the management of dialysis patients, according to the relationships defined by the DHB or Department of Renal Medicine.
- Reports promptly any clinical or technical problems to appropriate staff
- Competently and promptly completes dialysis related documentation
- Interacts in a respectful and supportive manner with patients and their families
- Contributes to dialysis patient education on relevant aspects of care - Dialysis machine and procedures, medication, diet, fluid balance.
- Documents all clinical and technical activity according to protocols

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6. Supervision and ongoing competence to practice

The renal technician reports operationally to the Manager of the dialysis area.

Professional oversight for the renal technician is provided by the Professional Leader or person delegated to provide professional leadership at service level in the local DHB.

Ongoing competence to practice is assessed via:

- Maintenance of NZBDP Annual Practicing Certificate
- Annual review to maintain IV certification and other competencies according to the local DHB protocols
- Annual performance review by Manager of the dialysis area in partnership with the person responsible for professional leadership.

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7. Associated DHB Policies

Informed Consent
Medication Administration

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8. Review date

The NZBDP will review this document in November 2012 and distribute the revised version to all DHBs with renal services.