

DACUM Competency Profile for Hemodialysis Technician

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The Hemodialysis Technician is one who performs the hemodialysis treatment and provides supportive care to the End Stage Renal Disease patient by using the extracorporeal system to sustain life.

Duties		Tasks			
A	Assemble and Setup Hemodialysis Machine	A-1 Start water purification system (RO)	A-2 Test water system for chlorine/chloramine	A-3 Prepare bath and connect to machine	A-4 Turn on and test hemodialysis machine functions
		A-5 Verify patient and schedule	A-6 Test dialyzer for disinfectant and verify	A-7 Prime the dialyzer and blood lines	A-8 Prepare medications for administration
B	Perform Pre-evaluation of Patient	B-1 Visually evaluate the patient's condition	B-2 Weight the patient	B-3 Measure vital signs	B-4 Review recent patient medical history
		B-5 Perform physical assessment	B-6 Perform access assessment	B-7 Perform peripheral sticks for blood dress if necessary	B-8 Determine treatment duration and fluid removal
		B-9 Record pre-dialysis data			
C	Initiate Hemodialysis Treatment	C-1 Test extracorporeal system for residual disinfectant	C-2 Verify/match patient and dialyzer	C-3 Cross-check dialysis orders	C-4 Test dialystate conductivity
		C-5 Test machine alarm signs	C-6 Perform venipuncture on patient	C-7 Draw blood samples for lab work	C-8 Check blood sugar of diabetic patients
		C-9 Connect patient to machine	C-10 Adjust hemodialysis machine settings	C-11 Reassess patient's blood pressure	C-12 Record initiation of treatment
D	Monitor Hemodialysis Treatment	D-1 Follow patient's schedule	D-2 Monitor patient's blood pressure	D-3 Monitor and adjust machine settings during treatment	D-4 Observe physical and mental status of patient
		D-5 Respond to machine alarm signals	D-6 Respond to patient calls	D-7 Record treatment data	D-8 Report pertinent information to appropriate health care team members
		D-9 Receive report on pertinent information			

E

Respond to Emergencies

E-1 Respond to hypotensive emergencies	E-2 Respond to air embolism emergency	E-3 Respond to hemolysis emergency	E-4 Respond to blood leak emergency
E-5 Respond to seizure emergency	E-6 Respond to pryogen reaction emergency	E-7 Respond to water system failure	E-8 Resuscitate patient and administer pulmonary massage
E-9 maintain open airway	E-10 Evacuate patients from facility in disaster situations	E-11 Activate emergency medical system	E-12 Respond to machine failure

F

Discontinue Hemodialysis Treatment

F-1 Gather post-treatment supplies	F-2 Draw post-treatment blood samples	F-3 Return blood to patient	F-4 Monitor vital signs for stability
F-5 Disconnect patient from machine	F-6 Perform post-evaluation on patient	F-7 Perform post access care	F-8 Prepare dialyzer for reprocessing
F-9 Discharge patient	F-10 Record summary notes		

G

Disassemble Hemodialysis Machine

G-1 Remove and discard disposable biohazardous waste	G-2 Remove, retrieve and prepare dialyzer for reuse	G-3 Clean machine exterior and dialysate containers with disinfectant	G-4 Prepare setup for next patient
G-5 Rinse and disinfect machine and dialysate containers	G-6 Turn off water purification (RO) system		

H

Process Dialyzers

H-1 Prepare disinfectant tanks	H-2 Rinse dialyzers for post-treatment	H-3 Process dialyzers	H-4 Complete documentation
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I

Perform Other Job Responsibilities

I-1 Clean and disinfect work area and re-usable supplies	I-2 Stock supplies	I-3 Refer patients to other personnel/professionals	I-4 Call for patient transportation
I-5 Prepare on/off packs	I-6 Maintain professional competencies	I-7 Precept less-experienced workers	I-8 Teach patients
I-9 Input patient information to files	I-10 Transfer patients from wheelchair to recliner	I-11 Prepare cleaning solutions	I-12 Assist patient with activities of daily living
I-13 Participant in continuous quality performance			

Future Trends/Issues/Concerns

- Advanced technology and its associated changes
- Availability of patient transportation
- Bloodborne pathogens
- Continuing education requirements
- Government regulations
- Health care reform
- Increase in patient acuity
- Increasing responsibility for technicians

- Managed care in the future
- National standardization of competencies

- Ownership of facilities
- Quality of life
- Rationing of care provided
- Reimbursement
- Safety needle requirements
- Salary
- State mandated education requirements

Knowledge & Skills

- Age related bio-psychosocial issues
- Anticoagulation therapies
- Appropriate tubes for lab work
- Aseptic technique
- Available emergency equipment
- Basic computer skills
- Basic math skills
- Basic renal anatomy, physiology, pathophysiology
- Bio-hazardous waste/medical waste disposal
- Blood clotting mechanism
- Body mechanics
- Catheters
- Charting principles
- Chemical disinfectants
- Communication skills (basic spelling/abbreviations)
- CPR
- Decision-making skills
- Delegation skills
- Dialysate procedures
- Emergency evacuation plan
- EMS activations
- Fire extinguisher location & operation
- Grafts & fistulas
- Heimlich maneuver
- Identification of test strips
- Kilogram scale & conversion to pounds
- Machine alarms/corrections
- Machine operations
- medical terminology
- Medication actions
- Medication administration
- Needle removal techniques
- Observation skills

- Patient warning signs
- Physical assessment
- Policy & procedures for assembly & setup of machine and dialyzer
- Priming procedures
- Principles of dialysis machine
- Principles of hemodialysis
- Problem-solving skills
- Procedures for unusual occurrences
- Re-processing procedure
- Sharps disposal
- Sterile technique
- Teaching skills
- Testing parameters
- Transfer techniques
- Venipuncture techniques
- Vital signs
- Water purification & delivery system

Tools, Equipment, Supplies And Materials

- Ambu bag
- Ampules
- Assessment equipment
- Biohazardous containers/bags
- Blood pressure cuff
- Blood sample tubes
- Chloride meter
- Citric acid and heat
- Clamps
- Computer
- Copy Machine
- Crash car
- Dialyzer
- Disinfecting reagents
- Disposable supplies
- Fax machine
- Fire extinguisher
- Formaldehyde
- Glucose monitoring equipment
- Gluteraldehyde
- Hemodialysis machine
- Ice Machine
- Needles
- Non-occluding forceps & clamps
- Oxygen tanks
- Peroxyacetic acid
- Policy & procedure manual
- Protective equipment (gown, gloves, mask)
- Rolodex
- Scissors
- Sphygmomanometer
- Stethoscope
- Suction
- Support belts for back
- Syringes & needles
- Telephone
- Telephone book

- Test strips
- Thermometer
- Wheel Chair

Worker Characteristics

- Ability to deal with stress
- Adaptable
- Confidentiality
- Considerate of patient
- Cultural sensitivity
- Dedicated
- Dependable
- Efficient
- Good personal hygiene
- Helping attitude
- Honest
- Initiative
- Integrity
- Nurturing
- Organized
- Patient
- Pleasant
- Productive
- Professional behavior
- Punctual
- Remains calm
- Respectful
- Responsible
- Self-directed
- Stamina
- Tactful
- Team player
- Thorough
- Tolerant
- Trustworthy

