PUGET SOUND kidney centers

2026 Home Hemodialysis Standing Orders

1. Laboratory Tests:

Drawn on Admissions	• CMP w/ Adjusted Calcium *#90283* • *Phosphorus #718* • CBC (H/H, RBC, Indices, WBC, PLT) *#1759* • HBsAg *#498*, HBsAb *#8475*, HBcAb *#501*, HCVAb *#8472* • Iron & TIBC (%Sat) *#7573*, Ferritin *#457* • Intact PTH without calcium *#35202*
Initial 30 days of Training	• End of week 1, 3, and PRN: CMP *w/ Adj Ca #90283*, Hgb *#510*, Kt/V *Single Pool +nPNA #10746* or Std Kt/V *#10755*
Monthly	• CMP w/ Adjusted Calcium *#90283* • *Phosphorus #718* • CBC (H/H, RBC, Indices, WBC, PLT) *#1759* • HBsAg *#498 if HBsAb titer less than 10* • Kt/V *Single Pool + nPNA #10746* • Standard Kt/V if dialyzing > 3 times a week
Quarterly	• Iron &TIBC (%Sat) *#7573*, Ferritin *#457*
Quadrimester	• Intact PTH without calcium *#35202*
Annual	• HBsAb *#8475*, HCVAb *#8472*

PRN	• Blood Cultures *#389* & Wound Cultures *#4550* of access site (**All cultures must be drawn in-center**):
	  ○ Patient with a central venous catheter and a fever of >100.4°F or >38.0°C, draw two (2) sets of blood cultures from the access/bloodlines per Blood Culture Policy. Notify MD.
	  ○ Patient with a fistula or graft and a fever of >100.4°F or >38.0°C, call MD for orders.
	  ○ Culture and Sensitivity (with Gram Stain) on any drainage noted from a dialysis access site
	  ▪ Specify Site
	  ▪ Contact MD prior to initiation of dialysis if access infection suspected.
	• HBsAb *#8475* titer recheck 30 days after completion of Hepatitis B vaccination series
	• Phosphorus *#718* per dietitian/Care Coordinator discretion if not meeting goal.
	• Intact PTH *#35202* as indicated per Mineral and Bone Disorder Management P&P.
	• Recheck labs and notify MD per Critical Lab Notification to Nephrologist P&P
	• Vitamin D-25 *#17306*
	• Serum Aluminum *#6021*
	• Magnesium *#622*
	• Reticulocyte count *#793*

Note: Recheck labs and notify MD per Critical Lab Notification to Nephrologist P&P

2. Nutrition Standards of Care:

A. Follow Nutrition Standards of Care P&P

3. Water Testing:

Per Association for the Advancement of Medical Instrumentation (AAMI) Standards, water and dialysate cultures, LAL, and colony counts from machine and water treatment (ICD10 N18.6) are to be tested routine per schedule below, or as needed per clinical suspicion of the nurse:

Testing Schedule					
Initial Home Survey (Testing Done by Technical Services)	**Initial Home Treatment** (Sampling Done by RN)	**Quarterly Testing** (Sampling Done by Patient)	**Annual Testing** (Sampling Done by Patient)	**New or Change in Water Source** (Sampling Done by Patient)	**Patients On Well Water** Quarterly testing (Sampling Done by Patient)
AAMI (Raw Water)	AAMI (Product Water) LAL/CC (Dialysate)	LAL/CC (Dialysate)	AAMI (Raw and Product Water) LAL/CC (Dialysate)	AAMI (Raw and Product Water) LAL/CC (Dialysate)	AAMI (Raw and Product Water) LAL/CC (Dialysate)

4. Dialysis Adequacy:

A. Notify MD if:
   1. Kt/V < 1.2 (if dialyzing 3 times per week)
   2. Standard Kt/V < 2.0 (if dialyzing more than 3 times per week)
B. If Kt/V <1.2 or Std Kt/V < 2.0, recheck prior to end of current month (ICD10 Z49.31)
C. Ultrafiltration rate may not exceed 13 ml/kg/hr without MD order

5. Medications:

Oxygen and IV medications will not be given by patient or caregiver. Oxygen, subcutaneous medications, and IV medications (with the exception of heparin) can only be given while in the Home Department or during an in-center treatment by a nurse**.**

A. Epinephrine Auto Injector per Anaphylaxis P&P
B. Benadryl 25 mg IV:
   1. **FOR ALLERGIC REACTIONS ONLY**
   2. **CAUTION:** Known sedative that may impair driving performance. If patient treated with Benadryl, they should be instructed not to drive after dialysis**.**
C. Ondansetron 4 mg *PO* PRN nausea or vomiting, may repeat once
D. Acetaminophen 325 mg 1-2 PO every four (4) hours as needed for pain
E. Nitroglycerin 0.4 mg SL PRN chest pain:
   1. May repeat every five (5) minutes for up to 3 doses
   2. Page MD after the first dose is given
   3. **DO NOT GIVE IF BP SYSTOLIC IS < 100**
F. Glucose Tabs for Insulin Reaction (ICD10 E16.1): See Hypoglycemia Management P&P
G. Dextrose 50% for Insulin Reaction (ICD10 E16.1): See Hypoglycemia Management P&P
H. Heparin (1000 units/ml) heparin lock for central venous catheters

1. If patient is HIT positive or has heparin allergy, RN must consult with nephrologist for catheter lock orders.

I. Alteplase (tPA, cathflo activase):
   1. Follow Central Venous Catheter Protocols for indications and use
   2. Alteplase can only be administered in-center

J. Lidocaine 1% intradermal injection (up to 0.2ml) or EMLA cream for local anesthesia at each cannulation site PRN

K. Oxygen 2 L/min nasal cannula PRN dyspnea, chest pain or hypotension per Administration of Oxygen P&P

L. Triple antibiotic ointment (or alternative agent if allergic) to central venous catheter exit site every hemodialysis treatment (ICD10 N18.6), per Changing the Dressing of a Central Venous Catheter P&P

6. Vaccinations:

A. Hepatitis B Vaccination (ICD10 Z23) per Hepatitis B Prevention Program P&P

B. Seasonal Flu Vaccination (ICD10 Z23) per Administration of the Seasonal Influenza Vaccine P&P
   1. Should be administered to all patients 18 years or older during the flu season (October-April)
   2. Exceptions:
      a. Check package insert for contraindications
      b. Contraindicated per MD
      c. Patient refuses

C. Pneumococcal Vaccination (ICD10 Z23) per Administration of the Pneumococcal Vaccines P&P

7. Bone Disease Management Protocol:

A. Consult with patient's nephrologist for dosing and titration of oral calcium medications, vitamin D analogs, and calcimimetics."

B. For dosing of phosphate binders follow "Calcium and Phosphorus Management" P&P

8. Anemia Management:

A. For dosing of ESA (ICD10 D63.1) and IV Iron (ICD10 D50.9) see Administration and Anemia Management with Mircera P&P and Administration of IV iron sucrose (Venofer) for Home Patient P&P

9. Heparinization:

A. NxStage Short Daily Dialysis:
   1. If Patient is transferring from in-center, bolus dose = initial prime + 50% of the total hourly dose.
   2. No hourly heparin in Short Daily Dialysis
   3. Dose not to exceed 7500 units without Medical Director review

B. Extended (e.g. Nocturnal) Dialysis:
   1. Start with prime of 2000 units and 500 units/hr.
   2. Adjust per clearance of dialyzer and lines and bleeding time post dialysis
   3. Adjust prime first, then hourly
   4. Notify MD of Changes

C. Duration of bleeding after the removal of needles post dialysis should be within 10 minutes. If it is longer, heparin dose may need adjustment.
D. With excess bleeding despite Heparin decrease, evaluate access for stenosis prior to further dose adjustment.

10. Dialysis Access:

A. Maintain adequate blood flow rate (BFR):
   1. Minimum BFR of 200ml/min up to maximum ordered BFR but limited by arterial pressures (NEVER to exceed -240 mmHg) and venous pressures (NEVER to exceed +240 mmHg). Adjust BFR as needed to stay within pressure limits.
   2. Notify MD if unable to maintain blood flow rate ≥ 200 ml/min
B. Recirculation Studies (ICD10 N18.6 or as indicated by MD) to be drawn per Drawing Recirculation Studies for a Hemodialysis Access P&P if:
   1. Arterial pressure is ≥ -10 mmHg x1 at a 200 ml/min BFR
   2. Venous pressure is ≥ 140 mmHg x3 consecutive treatments at a 200 ml/min BFR
   3. Notify MD if**:**
      a. AV Fistula – Recirculation > 10%
      b. AV Graft – Recirculation >15%

11. Nursing:

A. During NxStage training, patient will dialyze 5 days a week unless otherwise ordered
B. Acceptable for patient to miss one run for 1st home supply delivery
C. Hypovolemia/Hypotension:
   1. Administer 0.9% Normal Saline IV in 100 ml increments up to 500 ml PRN
   2. Page MD if more than 500 ml is needed
D. Unstable Medical Condition:
   1. If on initial nursing assessment, the patient is felt to be medically unstable, do not initiate treatment. Page MD immediately to discuss most appropriate course of action.
   2. If during the course of treatment, the patient is felt to be medically unstable and/or it is unsafe to continue, dialysis may be terminated. Page MD immediately for additional orders prior to any transfer to hospital or discharge home, if appropriate.
   3. In any emergent situation, call 911.
E. Hypertension (Systolic Blood Pressure >200 or Diastolic Blood Pressure >120):
   1. Do not initiate dialysis
   2. Page MD for instructions
F. Tachycardia (Pulse > 120):
   1. Do not initiate dialysis
   2. Page MD for instructions
G. Use Low Dose Heparin per Anticoagulation Protocol P&P and page MD if:
   1. Evidence of recent fall
   2. Same day surgery
   3. Dental visit
   4. Epistaxis
   5. Suspected pericarditis

1. **Emergency Dialysis Orders:** (for in-center use)

A. In a declared emergency (earthquake, fire, flood, power-outage, etc.) where routine dialysis treatment cannot be performed the following adjustments to the dialysis prescription may be made:

1. Dialyzer: F160NR (if not available, F180NR may be substituted)
2. Dialysate: Per patient's prescription. If this is not available, the default dialysate will be K2.0/Ca2.5
3. Time: Maximum feasible up to prescribed time depending on the nature of the emergency.
4. MD will be notified if adjustments are made to the patient's dialysate or time
5. Heparinization
   - Use back-up orders if available
   - Hold if patient reports no heparin on run
   - Otherwise: Use table below for bolus dose
   - Normal Saline Flushes PRN for clotting

Time	**:00 Minutes**	**:15 Minutes**	**:30 Minutes**	**:45 Minutes**
2 Hours	2400 units heparin	2600 units heparin	2800 units heparin	3000 units heparin
3 Hours	3200 units heparin	3400 units heparin	3600 units heparin	3800 units heparin
4 Hours	4000 units heparin	4200 units heparin	4400 units heparin	4600 units heparin

See Electronic Signature in the EMR System