Priority Health

MEDICAL POLICY
No. 91526-R11

END STAGE RENAL DISEASE (ESRD): RENAL DIALYSIS

Effective Date: February 1, 2026

Review Dates: 4/07, 2/08, 2/09, 2/10, 2/11, 12/11, 12/12, 12/13, 2/15, 2/16, 11/16, 8/17, 8/18, 8/19, 8/20, 2/22, 2/23, 8/23, 2/24, 2/25, 11/25

Date Of Origin: April 11, 2007

Status: Current

Summary of Changes

Additions:

- **Nerve conduction studies**: Routine testing for polyneuropathy of diabetes or end stage renal disease (ESRD) is not considered medically necessary and is not covered. Testing for the sole purpose of monitoring disease intensity or treatment efficacy in these 2 conditions is also not covered.

I. POLICY/CRITERIA

This policy applies to adults age 18 or older with a commercial or Medicaid plan.

A list of Priority Health approved dialysis facilities is available through Medical Management.

A. Maintenance **Renal Replacement Therapy (RRT) for End Stage Renal Disease (ESRD)**. Coverage requires the following:

1. Patient engagement and completion of Shared Decision Making (e.g. EMMI tools @ https://www.my-emmi.com/SelfReg/PHCKD) is **highly recommended (NOT required)**

2. Patient referral to a transplantation program occurs when the estimated glomerular filtration rate (eGFR) is <30 mL/min/1.73 m^2 [1] for those members who have no known contraindications* and interest in transplant as first line RRT.

   *Absolute contraindications to renal transplantation include:

   - Active infections.
   - Active malignancy.
   - Active substance abuse.
   - Reversible renal failure.
   - Uncontrolled psychiatric disease.

[1] Bunnapradist S, Danovitch GM. Evaluation of adult kidney transplant candidates. Am J Kidney Dis 2007; 50:890.

- Documented active and ongoing treatment nonadherence.

Kidney transplantation in adults: Evaluation of the potential renal transplant recipient, Up-to-Date on-line medical reference

3. Prior authorization of renal replacement modalities is required.

B. **Hemodialysis (non-home)** is covered for any of the following non-urgent indications:

1. Patients with eGFR 5 to 15 mL/min/1.73 m^2 with signs or symptoms attributable to ESRD including any:

   a. Fluid overload refractory to diuretics.
   b. Hypertension poorly responsive to antihypertensive medications
   c. Persistent metabolic disturbances that are refractory to medical therapy. These include hyperkalemia, hyponatremia, metabolic acidosis, hypercalcemia, hypocalcemia, and hyperphosphatemia.
   d. Persistent nausea and vomiting
   e. Evidence of malnutrition

2. Patients with eGFR <5 mL/min/1.73 m^2

Hemodialysis for urgent conditions (e.g., uremic pericarditis or pleuritic, progressive uremic encephalopathy) does not require prior authorization.

C. **Home Hemodyalysis:**

1. Priority Health covers home hemodialysis when **all** of the following are met:

   a. Patient meets criteria for hemodialysis as defined in the section above.
   b. Patient has stable end stage renal disease (ESRD).
   c. Patient is capable of completing a home dialysis training program and adhering to a prescribed treatment regimen.
   d. Patient has an adequate caregiver and arrangements with a backup, facility-based dialysis center.
   e. Patient is under the care of a physician and receiving services under a plan of care.

2. For **Medicaid** members, if a member qualifies for Medicare, coverage begins the first day of hemodialysis for chronic renal failure.
3. Dialysis equipment and supplies are covered at the contracted fee and are not separately billable.

4. Wearable hemodialysis units/wearable artificial kidneys are considered investigational and experimental.

D. Peritoneal Dialysis

Peritoneal dialysis in the home is considered medically necessary for ESRD.

E. Nerve conduction studies

Routine testing for polyneuropathy of diabetes or end stage renal disease (ESRD) is not considered medically necessary and is not covered. Testing for the sole purpose of monitoring disease intensity or treatment efficacy in these two conditions is also not covered (see also **Priority Health Billing Policy No. 135 – Nerve Conduction Studies / Electromyography**).

Note: Prior Authorization of vascular access (AV Fistula/Graft) or Peritoneal catheter is required for all maintenance dialysis requests.

Please see Parenteral Nutritional Therapy Medical Policy #91517 for Intradialytic Parenteral Nutrition criteria.

II. CENTERS FOR MEDICARE & MEDICAID SERVICES (CMS) COVERAGE DETERMINATION

Any applicable federal or state mandates will take precedence over this medical coverage policy.

Medicare: Refer to the CMS Online Manual System (IOMs) and Transmittals. For the most current applicable CMS National Coverage Determination (NCD)/Local Coverage Determination (LCD)/Local Coverage Article (LCA) refer to CMS Medicare Coverage Database.

The information below is current as of the review date for this policy. However, the coverage issues and policies maintained by CMS are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. MAC jurisdiction for purposes of local coverage determinations is governed by the geographic service area where the Medicare Advantage plan is contracted to provide the service. Please refer to the Medicare Coverage Database website for the most current applicable NCD, LCD, LCA, and CMS Online Manual System/Transmittals.

National Coverage Determinations (NCDs)	
Sensory Nerve Conduction Threshold Tests (sNCTs) 160.23	
Local Coverage Determinations (LCDs)	
CGS Administrators, LLC	None identified
First Coast Service Options, Inc.	None identified
National Government Services, Inc.	None identified
Noridian Healthcare Solutions	None identified
Novitas Solutions, Inc.	None identified
Palmetto GBA	None identified
WPS Insurance Corporation	Nerve Conduction Studies and Electromyography L34594 A57478

See also: Medicare Benefit Policy Manual, Chapter 11 – End Stage Renal Disease (ESRD)

III. MEDICAL NECESSITY REVIEW

Prior authorization for certain drugs, devices, services, and procedures may or may not be required. In cases where prior authorization is required, providers will submit a request demonstrating that a drug, service, or procedure is medically necessary. For more information, please refer to the Priority Health Provider Manual.

IV. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- **HMO/EPO:** ***This policy applies to insured HMO/EPO plans.***
- **POS:** ***This policy applies to insured POS plans.***
- **PPO:** ***This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.***
- **ASO:** ***For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.***
- **INDIVIDUAL:** ***For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.***
- **MEDICARE:** ***Coverage is determined by the Centers for Medicare and Medicaid Services (CMS) and/or the Evidence of Coverage (EOC); if a coverage determination has not been adopted by CMS, this policy applies.***
- **MEDICAID/HEALTHY MICHIGAN PLAN:** ***For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-***

2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.

V. DESCRIPTION

Chronic Kidney Disease (CKD) is a general term for a group of heterogeneous disorders affecting kidney structure and function. CKD is a progressive condition, which is defined as kidney damage which lasts greater than or equal to three (3) months demonstrated by pathologic abnormalities, in abnormal blood or urine markers or on renal imaging, and/or a glomerular filtration rate (GFR) less than 60 mL/min/1.73m^2 The abnormal kidney function must persist for greater than or equal to three (3) months with or without kidney damage. Kidney failure is defined as either a GFR of less than 15 mL/min/1.73m^2 or as the need for renal replacement therapy, i.e., dialysis or renal transplantation. Some causes of kidney failure are diabetes, hypertension, glomerulonephritis, cystic kidney disease, nephrotoxic agents, and infection.

End stage renal disease (ESRD) is traditionally considered as the most serious outcome of CKD. ESRD is defined as the stage when renal impairment appears irreversible and permanent requiring long-term dialysis or kidney transplantation in order to maintain life. Rapidly progressive diseases may lead to ESRD within months but most diseases evolve over decades, and some patients do not progress during many years of follow-up.[2]

Although the rate of all-cause mortality for dialysis patients remains higher than the general population, the life expectancy of patients with end-stage renal disease (ESRD) has gradually improved since the introduction of dialysis in the 1960s. According to the 2013 United States Renal Data System (USRDS) report, the adjusted 60-month survival probabilities measured from day 1 of therapy for all patients was 0.30 for the cohort starting in 1998 compared with 0.36 for the cohort starting in 2006[3]

Dialysis modalities include hemodialysis, either in a dialysis center or at home, or peritoneal dialysis, including chronic ambulatory peritoneal dialysis (CAPD) or automated peritoneal dialysis (APD). Conservative nondialysis care may be the

[2] KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. Kidney Int Suppl 2013; 3:5.
[3] http://www.usrds.org/atlas.aspx

appropriate decision for many older or more infirm individuals,[4] while pre-emptive or early transplantation may be the best for many other patients.

Patient centered education regarding predialysis and dialysis preparation has been advised to begin early; to involve patients, their families, and their caregivers, if possible; and to be continually reinforced in a positive and patient sensitive manner. [5] [6] Further, given the high prevalence of cognitive impairment [7]and delirium among patients with kidney failure, as well as acknowledged difficulties predicting the rate of progression to kidney failure among patients with advanced CKD, [8] [9]it is imperative that patients' informants and proxy decision makers be involved in the decision-making process early in the disease state.

The Ellipsys Vascular Access System is a minimally invasive device used to create a percutaneous AVF for hemodialysis access in patients with end-stage renal disease (ESRD). The system allows percutaneous access to the proximal radial artery in the forearm to create the AVF. Under high frequency ultrasound guidance, an outer access cannula, guidewire, and vessel capture construct creates a connection of the vein to the artery intravascularly. Low power thermal energy is used to cut the walls of the vessels and fuse the tissue, creating a permanently fused anastomosis without leaving any foreign material in the resulting AVF. The AVF creation procedure utilizing the Ellipsys System can be done with a single puncture, under regional or local anesthesia, and does not require implants or sutures.

The Ellipsys Vascular Access System (VAS) received de novo device classification on January 10, 2017 (DEN170004). It was cleared for marketing through the FDA 510(k) premarket notification process on October 5, 2018 (K181725). Two subsequent clearances (K183615 and K191114) reflected minor device modifications without changes to patient indications. This class II device is regulated by the FDA Code of Federal Regulations (CFR) under regulation number 21 CFR 870.1252 with product code PQK (percutaneous catheter for creation of an arteriovenous fistula for hemodialysis access).

[4] Davison SN. End-of-life care preferences and needs: perceptions of patients with chronic kidney disease. Clin J Am Soc Nephrol. 2010;5(2):195-204.

[5] Saggi SJ, Allon M, Bernardini J, Kalantar-Zadeh K, Shaffer R, Mehrotra R. Considerations in the optimal preparation of patients for dialysis. Nat Rev Nephrol. 2012;8(7):381-389.

[6] Morton R, Tong A, Howard K, Snelling P, Webster A. The views of patients and carers in treatment decision making for chronic kidney disease: systematic review and thematic synthesis of qualitative studies. BMJ. 2010;340:c112.

[7] Schell JO, Patel UD, Steinhauser KE, Ammarell N, Tulsky JA. Discussions of the kidney disease trajectory by elderly patients and nephrologists: a qualitative study. Am J Kidney Dis. 2012;59(4):495-503.

[8] Levin A, Djurdjev O, Beaulieu M, Er L. Variability and risk factors for kidney disease progression and death following attainment of stage 4 CKD in a referred cohort. Am J Kidney Dis. 2008;52(4):661-671.

[9] O'Hare AM, Batten A, Burrows NR, et al. Trajectories of kidney function decline in the 2 years before initiation of longterm dialysis. Am J Kidney Dis. 2012;59(4):513-522.

The WavelinQ EndoAVF system (previously branded as the EverlinQ endoAVF System) is U.S. Food and Drug Administration (FDA)-cleared for the percutaneous creation of an arteriovenous fistula (AVF) in the arm using separate access sites for the peripheral artery and peripheral vein. The WavelinQ system consists of a pair of over-the-wire catheters with magnets arranged to pull them into alignment and opposition. The venous catheter contains a spring-loaded radiofrequency (RF) electrode and the arterial catheter contains a ceramic backstop intended to align with the venous RF electrode.

During the WavelinQ EndoAVF procedure, the arterial catheter is inserted into the ulnar artery via the brachial artery, and the venous catheter is inserted into the ulnar vein via the brachial vein. The catheters are aligned, and the magnets hold the artery and vein together. The RF electrode is released from the venous catheter and energized for approximately 2 seconds. This creates an anastomosis between the ulnar vessels, resulting in a side-to-side ulnar vein fistula in the arm. If the patient has more than 1 brachial vein, the entry brachial vein is coil-embolized to redirect flow to the superficial veins. In clinical trials, the WavelinQ EndoAVF procedure was carried out in an outpatient setting under conscious sedation and local anesthesia.

On June 22, 2018, the FDA granted de novo marketing authorization for the EverlinQ EndoAVF system (DEN160006). The FDA subsequently granted two 510(k) clearances for WavelinQ devices (K192239 and K182796) with minor design modifications of the de novo-authorized device. These devices are classified under product code PQK (percutaneous catheter for creation of an arteriovenous fistula for hemodialysis access). These devices are indicated for " … the creation of an arteriovenous fistula (AVF) using concomitant ulnar artery and ulnar vein or concomitant radial artery and radial vein in patients with minimum artery and vein diameters of 2.0 [millimeters (mm)] at the fistula creation site who have chronic kidney disease and need hemodialysis".

According to the Kidney Disease Outcomes Quality Initiative [10] patients who reach CKD stage 4 (GFR < 30 mL/min/1.73 m2), including those who have imminent need for maintenance dialysis at the time of initial assessment, should receive education about kidney failure and options for its treatment, including kidney transplantation, PD, HD in the home or in-center, and conservative treatment. Patients' family members and caregivers also should be educated about treatment choices for kidney failure.

[10] Kidney Disease Outcomes Quality Initiative: Am J Kidney Dis. 2015;66(5):896

Kidney transplantation is the treatment of choice for most patients with end-stage renal disease (ESRD)[11], [12] A successful kidney transplant improves quality of life and reduces the mortality risk for the majority of patients when compared with maintenance dialysis.

Approximately 2.5 percent of patients with end-stage renal disease (ESRD) received a renal transplant as the initial treatment for their ESRD.[13] Transplantation should be discussed with all patients with irreversible and progressive chronic kidney disease (CKD).

Patients who are interested in transplantation and who have no known contraindications should be referred to a transplantation program when the estimated glomerular filtration rate (eGFR) is <30 mL/min/1.73 m^2 .[14]Although no form of renal replacement is indicated at this level of kidney function, this early referral allows sufficient time for a complete evaluation and for interventions that may be required to address relative contraindications prior to transplantation, both of which can be time consuming. It also allows an opportunity for the candidate to explore his/her potential living-donor options in a timely manner, which may facilitate a transplant before needing dialysis. It is difficult to predict with accuracy the rate of deterioration of kidney function, and, ideally, the transplant should take place before dialysis is required.

Preparation for dialysis is integrated into the overall care of the patient with advanced CKD. Ideally, the decision to initiate dialysis is made long after consideration of the patient for kidney transplantation and after the patient has already chosen his or her dialysis modality through a comprehensive shared decision making process. In addition, it is advisable to have appropriate and functioning access in place.

The most important study that informs this recommendation is the IDEAL Study. [15] In this clinical trial conducted in 32 centers in Australia and New Zealand, 828 adult patients with creatinine clearance of 10 to 15 mL/min/1.73 m2 were randomized to begin dialysis treatment earlier (10-14 mL/min/1.73 m2; n 5 404) or later (5-7 mL/min/1.73 m2; n 5 424). Upon follow-up, 19% of participants assigned to start dialysis early started later, and 76% of participants assigned to start dialysis late started early. Hence, mean creatinine clearance at the time of initiation of dialysis in the early and late groups was 12.0 and 9.8 mL/min (eGFR, 9.0 vs 7.8 mL/min/1.73 m2), and the median difference in time to dialysis

[11] Wolfe RA, Ashby VB, Milford EL, et al. Comparison of mortality in all patients on dialysis, patients on dialysis awaiting transplantation, and recipients of a first cadaveric transplant. N Engl J Med 1999; 341:1725.
[12] Wolfe RA, Ashby VB, Milford EL, et al. Comparison of mortality in all patients on dialysis, patients on dialysis awaiting transplantation, and recipients of a first cadaveric transplant. N Engl J Med 1999; 341:1725.
[13] USRDS data
[14] Bunnapradist S, Danovitch GM. Evaluation of adult kidney transplant candidates. Am J Kidney Dis 2007; 50:890.
[15] Cooper BA, Branley P, Bulfone L, et al. A randomized, controlled trial of early versus late initiation of dialysis. N Engl J Med. 2010;363(7):609-619.

initiation was 5.6 months. There was no significant difference in time to death, CV or infectious events, or complications of dialysis. [16]These results did not differ even when the analyses were restricted to individuals who started treatment with PD. Furthermore, the trend for higher total health care costs in individuals assigned to start dialysis early was not significantly different, [17]

The 2012 KDIGO guidelines suggest that dialysis be initiated when there are signs or symptoms attributable to kidney failure (such as serositis, acid-base or electrolyte disorders not easily corrected medically, pruritus); an inability to control volume status or blood pressure; a progressive deterioration in nutritional status that is refractory to dietary interventions; or cognitive impairment. [18]The KDIGO guidelines state that such signs and symptoms often but not invariably occur when the eGFR is between 5 and 10 mL/min/1.73 m^2.

The 2014 Canadian Society of Nephrology guidelines recommend monitoring and actively treating symptoms when the eGFR declines below 15 mL/min/1.73 m^2 [19]The guidelines recommend commencing dialysis in asymptomatic patients when the eGFR declines to below 6 mL/min/1.73 m^2 or when symptoms occur [20]

European guidelines suggest that, in patients with a GFR <15 mL/min/1.73 m^2, dialysis should be considered when symptoms are present, while recognizing that the majority of patients will be symptomatic and need to start dialysis with GFR in the range of 6 to 9 mL/min/1.73 m^2 [21]

The 2015 KDOQI guidelines suggest that the decision to start dialysis should be based on uremic signs and symptoms, evidence of protein energy wasting, and the ability to medically manage metabolic abnormalities and volume overload and not based upon the level of kidney function [22]

Nerve Conduction Studies

nerve conduction studies (NCS) are diagnostic tests used to assess the electrical activity of muscles and the function of peripheral nerves. NCSs are usually required for a clinical diagnosis of peripheral nervous system disorders. The intensity and extent of testing with NCS are matters of clinical judgment

[16] Johnson DW, Wong MG, Cooper BA, et al. Effect of timing of dialysis commencement on clinical outcomes of patients with planned initiation of peritoneal dialysis in the IDEAL Trial. Perit Dial Int. 2012;32(6):595-604.
[17] Harris A, Cooper BA, Li JJ, et al. Cost-effectiveness of initiating dialysis early: a randomized controlled trial. Am J Kidney Dis. 2011;57(5):707-715.
[18] KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. Kidney Int Suppl 2013; 3:5.
[19] Nesrallah GE, Mustafa RA, Clark WF, et al. Canadian Society of Nephrology 2014 clinical practice guideline for timing the initiation of chronic dialysis. CMAJ 2014; 186:112.
[20] Nesrallah GE, Mustafa RA, Clark WF, et al. Canadian Society of Nephrology 2014 clinical practice guideline for timing the initiation of chronic dialysis. CMAJ 2014; 186:112.
[21] Tattersall J, Dekker F, Heimbürger O, et al. When to start dialysis: updated guidance following publication of the Initiating Dialysis Early and Late (IDEAL) study. Nephrol Dial Transplant 2011; 26:2082.
[22] National Kidney Foundation. KDOQI Clinical Practice Guideline for Hemodialysis Adequacy: 2015 update. Am J Kidney Dis 2015; 66:884.

developed after the initial pre-test evaluation and later modified during the testing procedure.

Nerve conduction studies are used to measure action potentials resulting from peripheral nerve stimulation which are recordable over the nerve or from an innervated muscle. With this technique, responses are measured between 2 sites of stimulation, or between a stimulus and a recording site.

Nerve conduction studies are of two general types: sensory and motor. Either surface or needle electrodes can be used to stimulate the nerve or record the response. Axonal damage or dysfunction generally results in loss of nerve or muscle potential response amplitude, whereas demyelination leads to prolongation of conduction time and slowing of conduction velocity.

Obtaining and interpreting NCS results requires extensive interaction between the performing qualified health care professional and the patient. They are most effective when both obtaining raw data and interpretation are performed concurrently on a real-time basis.

Results of the NCS reflect on the integrity and function of:

(I) the myelin sheath (Schwann cell derived insulation covering an axon), and

(II) the axon (an extension of neuronal cell body) of a nerve.

Interruption of axon and dysfunction of myelin will both affect NCS results.

Uremia	
Signs	**Symptoms**
• Fatigue • Lethargy • Confusion • Anorexia • Nausea • Alterations in senses of smell and taste • Cramps • Restless legs • Sleep disturbances • Pruritus	• Seizures/change in seizure threshold • Amenorrhea • Reduced core body temperature • Protein-energy wasting • Insulin resistance • Heightened catabolism • Serositis (pleuritis, pericarditis) • Hiccups • Platelet dysfunction • Somnolence

Abdel-Kader K, Unruh ML, Weisbord SD. Symptom burden, depression, and quality of life in chronic and end-stage kidney disease. Clin J Am Soc Nephrol. 2009;4(6):1057-1064.

Many patients can be treated with either peritoneal dialysis or hemodialysis. The selection of dialysis modality is influenced by a number of considerations such as availability and convenience, comorbid conditions, socioeconomic and dialysis-center factors, the patient's home situation, the method of clinician reimbursement, and the ability to tolerate volume shifts [23],[24] Most patients do not have a medical contraindication to either therapy, and patients generally like to have a choice of modalities

Review of the clinical literature has provided definitive rationale behind ensuring appropriate patient selection for initiation of Peritoneal Dialysis (PD) vs. Hemodialysis (HD): Studies over the last 2 decades indicate that most patients starting maintenance dialysis in the United States are unaware of options for KRT other than in center HD[25], [26]

Peritoneal dialysis can be performed using several different techniques. Continuous ambulatory peritoneal dialysis (CAPD) involves multiple exchanges during the day (usually three), followed by an overnight dwell. Automated peritoneal dialysis (APD) refers to techniques that use an automated device to do multiple exchanges overnight, with or without a daytime dwell, such as continuous cycler peritoneal dialysis (CCPD), nightly intermittent peritoneal

[23] Van Biesen W, Vanholder R, Lameire N. The role of peritoneal dialysis as the first-line renal replacement modality. Perit Dial Int 2000; 20:375.
[24] Mehrotra R, Khawar O, Duong U, et al. Ownership patterns of dialysis units and peritoneal dialysis in the United States: utilization and outcomes. Am J Kidney Dis 2009; 54:289.
[25] Kutner NG, Zhang R, Huang Y, Wasse H. Patient awareness and initiation of peritoneal dialysis. Arch Intern Med. 2011;171(2):119-124.
[26] Mehrotra R, Marsh D, Vonesh E, Peters V, Nissenson A. Patient education and access of ESRD patients to renal replacement therapies beyond in-center hemodialysis. Kidney Int. 2005;68(1):378-390.

dialysis (NIPD), and tidal peritoneal dialysis (TPD). Of these, CCPD, the most commonly used, has a long daytime dwell and several cycles overnight. Upon initiating peritoneal dialysis, modality implemented (most commonly either CAPD or CCPD) is often left to patient choice based upon lifestyle or personal issues since ultrafiltration goals will be achieved similarly.

Home hemodialysis (HHD) is a treatment for end-stage renal disease (ESRD) in which the patient self-dialyzes several times per week at home during the day or overnight on a more intensive schedule than conventional, intermittent in-center hemodialysis (HD). HHD is intended to reduce morbidity and mortality associated with conventional HD by shortening the interdialytic interval, which decreases fluctuations in fluid, solute, and electrolyte balance, and more closely mimics physiological kidney function.

VI. CODING INFORMATION

*Prior Authorization not required for Dialysis for Priority Health Medicare members

ICD-10 Codes that <u>may</u> support medical necessity:

E08.21 – E08.29 Diabetes mellitus due to underlying condition with kidney complications
E09.21 – E09.29 Drug or chemical induced diabetes mellitus with kidney complications
E10.21 – E10.29 Type 1 diabetes mellitus with kidney complications

E11.21 – E11.29 Type 2 diabetes mellitus with kidney complications
E13.21 – E13.29 Other specified diabetes mellitus with kidney complications

I12.0 Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease
I12.9 Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
I13.0 - I13.2 Hypertensive heart and chronic kidney
N17.0 – N17.9 Acute kidney failure
N18.1 Chronic kidney disease, stage 1
N18.2 Chronic kidney disease, stage 2 (mild)
N18.3X Chronic kidney disease, stage 3 (moderate)
N18.4 Chronic kidney disease, stage 4 (severe)
N18.5 Chronic kidney disease, stage 5
N18.6 End stage renal disease
N18.9 Chronic kidney disease, unspecified

O10.311-O10.33 Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, childbirth, and the peurperium
T86.10 Unspecified complication of kidney transplant
T86.11 Kidney transplant rejection
T86.12 Kidney transplant failure
T86.13 Kidney transplant infection
T86.19 Other complication of kidney transplant
Z49.0-Z49.32 Encounter for care involving renal dialysis

<u>CREATION OF PERMANENT ACCESS</u>
CPT/HCPCS codes:

36818 Arteriovenous anastomosis, open; by upper arm cephalic vein transposition
36819 Arteriovenous anastomosis, open; by upper arm basilic vein transposition
36820 Arteriovenous anastomosis, open; by forearm vein transposition
36821 Arteriovenous anastomosis, open; direct, any site (e.g., Cimino type) (separate procedure)

36825 Creation of arteriovenous fistula by other than direct arteriovenous anastomosis (separate procedure); autogenous graft

36830 Creation of arteriovenous fistula by other than direct arteriovenous anastomosis (separate procedure); nonautogenous graft (e.g., biological collagen, thermoplastic graft)

49418 Insertion of tunneled intraperitoneal catheter (e.g., dialysis, intraperitoneal chemotherapy instillation, management of ascites), complete procedure, including imaging guidance, catheter placement, contrast injection when performed, and radiological supervision and interpretation, percutaneous

49421 Insertion of tunneled intraperitoneal catheter for dialysis, open

CPT/HCPCS codes covered with no Prior Authorization:

36836 Percutaneous arteriovenous fistula creation, upper extremity, single access of both the peripheral artery and peripheral vein, including fistula maturation procedures (eg, transluminal balloon angioplasty, coil embolization) when performed, including all vascular access, imaging guidance and radiologic supervision and interpretation [Ellipsys™ Vascular Access System (Medtronic)]

36837 Percutaneous arteriovenous fistula creation, upper extremity, separate access sites of the peripheral artery and peripheral vein, including fistula maturation procedures (eg, transluminal balloon angioplasty, coil embolization) when performed, including all vascular access, imaging guidance and radiologic supervision and interpretation [WavelinQ™ EndoAVF System (BD)]

DIALYSIS & RELATED PROCEDURES

Revenue codes:

0800 – 0809	Inpatient Renal Dialysis
0820 – 0829	Hemodialysis—Outpatient or Home
0830 – 0839	Peritoneal Dialysis—Outpatient or Home
0840 – 0849	Continuous Ambulatory Peritoneal Dialysis (CAPD)—Outpatient or Home
0850 – 0859	Continuous Cycling Peritoneal Dialysis (CCPD)—Outpatient or Home
0880 – 0889	Miscellaneous Dialysis

CPT/HCPCS codes:

(No PA required for codes 90935 – 90997 when reported as physician services on HCFA 1500 claim)

G0491 Dialysis procedure at a Medicare certified ESRD facility for acute kidney injury without ESRD

90935 Hemodialysis procedure with single evaluation by a physician or other qualified health care professional

90937 Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription

90945 Dialysis procedure other than hemodialysis (e.g., peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies), with single evaluation by a physician or other qualified health care professional

90947 Dialysis procedure other than hemodialysis (e.g., peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies) requiring

repeated evaluations by a physician or other qualified health care professional, with or without substantial revision of dialysis prescription

90957 End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month

90958 End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month

90959 End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month

90960 End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 4 or more face-to-face visits by a physician or other qualified health care professional per month

90961 End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 2-3 face-to-face visits by a physician or other qualified health care professional per month

90962 End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 1 face-to-face visit by a physician or other qualified health care professional per month

90965 End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents

90966 End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 20 years of age and older

90969 End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 12-19 years of age

90970 End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 20 years of age and older

90989 Dialysis training, patient, including helper where applicable, any mode, completed course

90993 Dialysis training, patient, including helper where applicable, any mode, course not completed, per training session

90999 Unlisted dialysis procedure, inpatient or outpatient

Condition Code *(report for home dialysis):*

74 Renal dialysis setting - home

36558	Insertion of tunneled centrally inserted central venous catheter, without subcutaneous port or pump; age 5 years or older
36581	Replacement, complete, of a tunneled centrally inserted central venous catheter, without subcutaneous port or pump, through same venous access
36589	Removal of tunneled central venous catheter, without subcutaneous port or pump
36800	Insertion of cannula for hemodialysis, other purpose (separate procedure); vein to vein
36810	Insertion of cannula for hemodialysis, other purpose (separate procedure); arteriovenous, external
36815	Insertion of cannula for hemodialysis, other purpose (separate procedure); arteriovenous, external revision, or closure
36831	Thrombectomy, open, arteriovenous fistula without revision, autogenous or nonautogenous dialysis graft (separate procedure)
36832	Revision, open, arteriovenous fistula; without thrombectomy, autogenous or nonautogenous dialysis graft (separate procedure)
36833	Revision, open, arteriovenous fistula; with thrombectomy, autogenous or nonautogenous dialysis graft (separate procedure)
36835	Insertion of Thomas shunt (separate procedure)
36838	Distal revascularization and interval ligation (DRIL), upper extremity hemodialysis access (steal syndrome)
36860	External cannula declotting (separate procedure); without balloon catheter
36861	External cannula declotting (separate procedure); with balloon catheter
36901	Introduction of needle(s) and/or catheter(s), dialysis circuit, with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, radiological supervision and interpretation and image documentation and report;
36902	Introduction of needle(s) and/or catheter(s), dialysis circuit, with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, radiological supervision and interpretation and image documentation and report; with transluminal balloon angioplasty, peripheral dialysis segment, including all imaging and radiological supervision and interpretation necessary to perform the angioplasty

36903	Introduction of needle(s) and/or catheter(s), dialysis circuit, with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, radiological supervision and interpretation and image documentation and report; with transcatheter placement of intravascular stent(s), peripheral dialysis segment, including all imaging and radiological supervision and interpretation necessary to perform the stenting, and all angioplasty within the peripheral dialysis segment
36904	Percutaneous transluminal mechanical thrombectomy and/or infusion for thrombolysis, dialysis circuit, any method, including all imaging and radiological supervision and interpretation, diagnostic angiography, fluoroscopic guidance, catheter placement(s), and intraprocedural pharmacological thrombolytic injection(s);
36905	Percutaneous transluminal mechanical thrombectomy and/or infusion for thrombolysis, dialysis circuit, any method, including all imaging and radiological supervision and interpretation, diagnostic angiography, fluoroscopic guidance, catheter placement(s), and intraprocedural pharmacological thrombolytic injection(s); with transluminal balloon angioplasty, peripheral dialysis segment, including all imaging and radiological supervision and interpretation necessary to perform the angioplasty
36906	Percutaneous transluminal mechanical thrombectomy and/or infusion for thrombolysis, dialysis circuit, any method, including all imaging and radiological supervision and interpretation, diagnostic angiography, fluoroscopic guidance, catheter placement(s), and intraprocedural pharmacological thrombolytic injection(s); with transcatheter placement of intravascular stent(s), peripheral dialysis segment, including all imaging and radiological supervision and interpretation necessary to perform the stenting, and all angioplasty within the peripheral dialysis circuit
36907	Transluminal balloon angioplasty, central dialysis segment, performed through dialysis circuit, including all imaging and radiological supervision and interpretation required to perform the angioplasty (List separately in addition to code for primary procedure)
36908	Transcatheter placement of intravascular stent(s), central dialysis segment, performed through dialysis circuit, including all imaging radiological supervision and interpretation required to perform the stenting, and all angioplasty in the central dialysis segment (List separately in addition to code for primary procedure)
36909	Dialysis circuit permanent vascular embolization or occlusion (including main circuit or any accessory veins), endovascular, including all imaging and radiological supervision and interpretation necessary to complete the intervention (List separately in addition to code for primary procedure)
37246	Transluminal balloon angioplasty (except lower extremity artery(ies) for occlusive disease, intracranial, coronary, pulmonary, or dialysis circuit), open or percutaneous, including all imaging and radiological supervision and interpretation necessary to perform the angioplasty within the same artery; initial artery

37247	Transluminal balloon angioplasty (except lower extremity artery(ies) for occlusive disease, intracranial, coronary, pulmonary, or dialysis circuit), open or percutaneous, including all imaging and radiological supervision and interpretation necessary to perform the angioplasty within the same artery; each additional artery (List separately in addition to code for primary procedure)
49422	Removal of tunneled intraperitoneal catheter
G0420	Face-to-face educational services related to the care of chronic kidney disease; individual, per session, per one hour
G0421	Face-to-face educational services related to the care of chronic kidney disease; group, per session, per one hour
G0492	Dialysis procedure with single evaluation by a physician or other qualified health care professional for acute kidney injury without ESRD
90940	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator method
90951	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month
90952	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month
90953	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month
90954	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month
90955	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month
90956	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month
90963	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents
90964	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents

90967 End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients younger than 2 years of age

90968 End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 2-11 years of age

C7513 Dialysis circuit, introduction of needle(s) and/or catheter(s), with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, with transluminal balloon angioplasty of central dialysis segment, performed through dialysis circuit, including all required imaging, radiological supervision and interpretation, image documentation and report (*Billable by ASC)*

C7514 Dialysis circuit, introduction of needle(s) and/or catheter(s), with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, with all angioplasty in the central dialysis segment, and transcatheter placement of intravascular stent(s), central dialysis segment, performed through dialysis circuit, including all required imaging, radiological supervision and interpretation, image documentation and report *(Billable by ASC)*

C7515 Dialysis circuit, introduction of needle(s) and/or catheter(s), with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, with dialysis circuit permanent endovascular embolization or occlusion of main circuit or any accessory veins, including all required imaging, radiological supervision and interpretation, image documentation and report *(Billable by ASC)*

C7530 Dialysis circuit, introduction of needle(s) and/or catheter(s), with diagnostic angiography of the dialysis circuit, including all direct puncture(s) and catheter placement(s), injection(s) of contrast, all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow including the inferior or superior vena cava, fluoroscopic guidance, with transluminal balloon angioplasty, peripheral dialysis segment, including all imaging and radiological supervision and interpretation necessary to perform the angioplasty and all angioplasty in the central dialysis segment, with transcatheter placement of intravascular stent(s), central dialysis segment, performed through dialysis circuit, including all imaging, radiological supervision and interpretation, documentation and report *(Billable by ASC)*

Not separately payable:

E1590 Hemodialysis machine

Not Covered:

C8000 Support device, extravascular, for arteriovenous fistula (implantable*) (Covered for Medicare)*

E1632 Wearable artificial kidney, each

E1635 Compact (portable) travel hemodialyzer system

VII. REFERENCES:

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3. Centers for Medicare & Medicaid Services. Nerve Conduction Studies and Electromyography. Local Coverage Determination (LCD) L34594. WPS Insurance Corp.
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16. Vale L, Cody JD, Wallace SA, Daly C, Campbell MK, Grant AM, Khan I, MacLeod AM. Continuous ambulatory peritoneal dialysis (CAPD) versus hospital or home haemodialysis for end-stage renal disease in adults. Cochrane Database of Systematic Reviews. 2014, Issue 1. Art. No.: CD003963.
