
Supplementary Online Content

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Appendix: Dialysis Codes

This supplementary material has been provided by the authors to give readers additional information about their work.

Appendix: Dialysis Codes

CPT Code	Description
36145	Introduction of needle or intracatheter; arteriovenous (AV) shunt created for dialysis (cannula, fistula, or graft)
36147	Introduction of needle and/or catheter, AV shunt created for dialysis (graft/fistula); initial access with complete radiological evaluation of dialysis access, including fluoroscopy, image documentation and report (includes access of shunt, injection[s] of contrast, and all necessary imaging from the arterial anastomosis and adjacent artery through entire venous outflow, including the inferior or superior vena cava)
36148	Introduction of needle and/or catheter, AV shunt created for dialysis (graft/fistula); additional access for therapeutic intervention (list separately in addition to code for primary procedure)
36800	Insertion of cannula for hemodialysis, other purpose (separate procedure); vein to vein
36810	Insertion of cannula for hemodialysis, other purpose (separate procedure); AV, external (Scribner type)
36815	Insertion of cannula for hemodialysis, other purpose (separate procedure); AV, external revision, or closure
36825	Creation of AV fistula by other than direct AV anastomosis (separate procedure); autogenous graft
36830	Creation of AV fistula by other than direct AV anastomosis (separate procedure); nonautogenous graft (e.g., biological collagen, thermoplastic graft)
36831	Thrombectomy, open, AV fistula without revision, autogenous or nonautogenous dialysis graft (separate procedure)
36832	Revision, open, AV fistula; without thrombectomy, autogenous or nonautogenous dialysis graft (separate procedure)
36833	Revision, open, AV fistula; with thrombectomy, autogenous or nonautogenous dialysis graft (separate procedure)
36838	Distal revascularization and interval ligation (DRIL), upper extremity hemodialysis access (steal syndrome)
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
50340	Recipient nephrectomy (separate procedure)
50370	Removal of transplanted renal allograft
75791	Angiography, AV shunt, complete evaluation of dialysis access
90918	End-stage renal disease (ESRD) related services 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
90919	ESRD related services per full month; for patients between 2 and eleven years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents
90920	ESRD related services per full month; for patients between twelve and nineteen years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents
90921	ESRD related services per full month; for patients twenty years of age and older
90922	ESRD related services (less than full month), per day; for patients younger than 2 years of age
90923	ESRD related services (less than full month), per day; for patients between 2 and eleven years of age
90924	ESRD related services (less than full month), per day; for patients between twelve and nineteen years of age
90925	ESRD related services (less than full month), per day; for patients twenty years of age and older
90935	Hemodialysis procedure with single physician evaluation
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 physician evaluation
90947	Dialysis procedure other than hemodialysis (e.g. peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies) requiring repeated physician evaluations, with or without substantial revision of dialysis prescription
90951	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 physician visits per month

CPT Code	Description
90952	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 physician visits per month
90953	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 physician visit per month
90954	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 physician visits per month
90955	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 physician visits per month
90956	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 physician visit per month
90957	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 physician visits per month
90958	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 physician visits per month
90959	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 physician visit per month
90960	ESRD related services monthly, for patients 20 years of age and older; with 4 or more face-to-face physician visits per month
90961	ESRD related services monthly, for patients 20 years of age and older; with 2-3 face-to-face physician visits per month
90962	ESRD related services monthly, for patients 20 years of age and older; with 1 face-to-face physician visit per month
90963	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	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
90965	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	ESRD related services for home dialysis per full month, for patients 20 years of age and older
90967	ESRD related services for dialysis less than a full month of service, per day; for patients younger than 2 years of age
90968	ESRD related services for dialysis less than a full month of service, per day; for patients 2-11 years of age
90969	ESRD related services for dialysis less than a full month of service, per day; for patients 12-19 years of age
90970	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
90997	Hemoperfusion (e.g. with activated charcoal or resin)
90999	Unlisted dialysis procedure, inpatient or outpatient
93990	Duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow)
99512	Home visit for hemodialysis
0505F	Hemodialysis plan of care documented (ESRD, P-ESRD)
0507F	Peritoneal dialysis plan of care documented (ESRD)
0516F	Anemia plan of care documented (ESRD)
4052F	Hemodialysis via functioning AV fistula (ESRD)
4053F	Hemodialysis via functioning AV graft (ESRD)

CPT Code	Description
4054F	Hemodialysis via catheter (ESRD)
4055F	Patient receiving peritoneal dialysis (ESRD)
90939	Hemodialysis access flow study to determine blood flow in grafts and AV fistulae by an indicator dilution method, hook-up; transcutaneous measurement and disconnection
90940	Hemodialysis access flow study to determine blood flow in grafts and AV fistulae by an indicator method
99559	Home infusion of peritoneal dialysis, per visit
HCPCS	Description
Q4081	Injection, epoetin alfa, 100 units (for ESRD on dialysis)
A4690	Dialyzer (artificial kidneys), all types, all sizes, for hemodialysis, each
A4740	Shunt accessory, for hemodialysis, any type, each
A4820	Hemodialysis kit supplies
E1510	Kidney, dialysate delivery system kidney machine, pump recirculating, air removal system, flowrate meter, power off, heater and temp control with alarm, IV poles, pressure gauge, concentrate container
E1590	Hemodialysis machine
E1592	Automatic intermittent peritoneal dialysis system
E1594	Cycler dialysis machine for peritoneal dialysis
E1630	Reciprocating peritoneal dialysis system
E1632	Wearable artificial kidney, each
E1635	Compact (portable) travel hemodialyzer system
G0257	Unscheduled or emergency dialysis treatment for an ESRD patient in a hospital outpatient department that is not certified as an ESRD facility
G0308	ESRD-RELATED SERVICES,AGE<2, 4+ MD VISITS/MONTH
G0309	ESRD-RELATED SERVICES,AGE<2, 2-3 MD VISITS/MONTH
G0310	ESRD-RELATED SERVICES,AGE<2, 1 MD VISIT/MONTH
G0311	ESRD-RELATED SERVICES,AGE 2-11, 4+ MD VISITS/MONTH
G0312	ESRD-RELATED SERVICES,AGE 2-11, 2-3 MD VISITS/MONTH
G0313	ESRD-RELATED SERVICES,AGE 2-11, 1 MD VISIT/MONTH
G0314	ESRD-RELATED SERVICES,AGE 12-19, 4+ MD VISITS/MONTH
G0315	ESRD-RELATED SERVICES,AGE 12-19, 2-3 MD VISITS/MONTH
G0316	ESRD-RELATED SERVICES,AGE 12-19, 1 MD VISIT/MONTH
G0317	ESRD-RELATED SERVICES,AGE 20+, 4+ MD VISITS/MONTH
G0318	ESRD-RELATED SERVICES,AGE 20+, 2-3 MD VISITS/MONTH
G0319	ESRD-RELATED SERVICES,AGE 20+, 1 MD VISIT/MONTH
G0320	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE <2, /MONTH
G0321	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE 2-11, /MONTH
G0322	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE12-19, /MONTH
G0323	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE20+, /MONTH
G0324	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE <2, /DAY
G0325	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE 2-11,/DAY
G0326	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE 12-19,/DAY
G0327	ESRD-RELATED SERVICES,HOME DIALYSIS,AGE 20+,/DAY
G8075	ESRD patient with documented dialysis dose of URR greater than or equal to 65% (or Kt/ V greater than or equal to 1.2)
G8076	ESRD patient with documented dialysis dose of URR less than 65% (or Kt/V less than 1.2)
G8077	Clinician documented that ESRD patient was not an eligible candidate for URR or Kt/V measure

HCPCS	Description
G8078	ESRD patient with documented hematocrit greater than or equal to 33 (or hemoglobin greater than or equal to 11)
G8079	ESRD patient with documented hematocrit less than 33 (or hemoglobin less than 11)
G8080	Clinician documented that ESRD patient was not an eligible candidate for hematocrit (hemoglobin) measure
G8081	ESRD patient requiring hemodialysis vascular access documented to have received autogenous AV fistula
G8082	ESRD patient requiring hemodialysis documented to have received vascular access other than autogenous AV fistula
G8085	ESRD patient requiring hemodialysis vascular access was not an eligible candidate for autogenous AV fistula
G8387	ESRD patient with a hematocrit or hemoglobin not documented
G8388	ESRD patient with URR or Kt/V value not documented, but otherwise eligible for measure
G8488	Clinician intends to report the ESRD measure group
G9013	ESRD demo basic bundle Level I
G9014	ESRD demo expanded bundle including venous access and related services
J0636	Injection, calcitriol, 0.1 mcg
J0881	Injection, darbepoetin alfa, 1 mcg (non-ESRD use)
J0882	Injection, darbepoetin alfa, 1 mcg (for ESRD on dialysis)
J0886	Injection, epoetin alfa, 1000 units (for ESRD on dialysis)
Q0139	Injection, ferumoxytol, for treatment of iron deficiency anemia, 1 mg (for ESRD on dialysis)
S9335	Home therapy, hemodialysis; administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment (drugs and nursing services coded separately), per diem
S9339	Home therapy; peritoneal dialysis, administrative services, professional pharmacy services, care coordination and all necessary supplies and equipment (drugs and nursing visits coded separately), per diem
Q4054	Injection, darbepoetin alfa, 1 mcg (for ESRD on dialysis)
Q4055	Injection, epoetin alfa, 1000 units (for ESRD on dialysis)
J0890	Injection, peginesatide, 0.1 mg (for ESRD on dialysis)
Q2047	Injection, peginesatide, 0.1 mg (for ESRD on dialysis)
ICD-9-CM	
Diagnosis Code	Description
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or ESRD
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or ESRD
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or ESRD
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or ESRD
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or ESRD
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or ESRD
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or ESRD
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or ESRD
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or ESRD
458.21	Hypotension of hemodialysis
584.5	Acute kidney failure with lesion of tubular necrosis
584.6	Acute kidney failure with lesion of renal cortical necrosis
584.7	Acute kidney failure with lesion of medullary (papillary) necrosis

ICD-9-CM Diagnosis Code	Description
584.8	Acute kidney failure with other specified pathological lesion in kidney
584.9	Acute kidney failure, unspecified
585.5	Chronic kidney disease, Stage V
585.6	End stage renal disease
792.5	Cloudy (hemodialysis) (peritoneal) dialysis affluent
996.56	Mechanical complications due to peritoneal dialysis catheter
996.68	Infection and inflammatory reaction due to peritoneal dialysis catheter
996.73	Other complications due to renal dialysis device, implant, and graft
E879.1	Kidney dialysis as the cause of abnormal reaction of patient, or of later complication, without mention of misadventure at time of procedure
V45.11	Renal dialysis status
V45.12	Noncompliance with renal dialysis
V56.0	Encounter for extracorporeal dialysis
V56.1	Fitting and adjustment of extracorporeal dialysis catheter
V56.2	Fitting and adjustment of peritoneal dialysis catheter
V56.31	Encounter for adequacy testing for hemodialysis
V56.32	Encounter for adequacy testing for peritoneal dialysis
V56.8	Encounter other dialysis
ICD-9-CM Procedure Code	Description
38.95	Venous catheterization for renal dialysis
39.27	Arteriovenostomy for renal dialysis
39.42	Revision of AV shunt for renal dialysis
39.95	Hemodialysis
54.98	Peritoneal dialysis
55.52	Nephrectomy of remaining kidney
55.53	Removal of transplanted or rejected kidney
55.54	Bilateral nephrectomy
Revenue Code	Description
0304	Laboratory - Clinical Diagnostic: Nonroutine dialysis
0800	Inpatient Dialysis
0801	Inpatient Hemodialysis
0802	Inpatient peritoneal dialysis
0803	Inpatient dialysis CAPD
0804	Inpatient dialysis CCPD
0809	Other inpatient dialysis
0820	Hemo OPD/Home
0821	Hemo OPD/Home: Hemodialysis comp or other rate
0822	Hemo OPD/Home: supplies
0823	Hemo OPD/home: equipment
0824	Hemo OPD/Home: Maintenance 100%

Revenue Code	Description
0825	Hemo OPD/Home: Support Services
0829	Hemo OPD/Home: Other HEMO outpatient
0830	Peritoneal OPD/Home
0831	Peritoneal OPD/Home: Peritoneal comp or other rate
0832	Peritoneal OPD/Home: Home supplies
0833	Peritoneal OPD/Home: Home equipment
0834	Peritoneal OPD/Home: Maintenance/100%
0835	Peritoneal OPD/Home: Support services
0839	Peritoneal OPD/Home: Other peritoneal dialysis
0840	CAPD OPD/Home
0841	CAPD OPD/Home: CAPD comp or other rate
0842	CAPD OPD/Home: Home supplies
0843	CAPD OPD/Home: Home equipment
0844	CAPD OPD/Home: Maintenance/100%
0845	CAPD OPD/Home: Support services
0849	CAPD OPD/Home: Other CAPD dialysis
0850	CCPD OPD/Home
0851	CCPD OPD/Home: CCPD comp or other rate
0852	CCPD OPD/Home: Home supplies
0853	CCPD OPD/Home: Home equipment
0854	CCPD OPD/Home: Maintenance/100%
0855	CCPD OPD/Home: Support services
0859	CCPD OPD/Home: Other CCPD dialysis
086x	Reserved for Dialysis (National Assignment)
087x	Reserved for Dialysis (State Assignment)
0880	Miscellaneous Dialysis
0881	Miscellaneous Dialysis: Ultrafiltration
0882	Home dialysis aid visit
0889	Miscellaneous Dialysis: Other misc dialysis

CPT: Current Procedural Terminology; HCPCS: Healthcare Common Procedure Coding System; ICD-9-CM: International Classification of Diseases, Ninth Revision, Clinical Modification; ESRD: end-stage renal disease; CAPD: Continuous Abdominoperitoneal Dialysis; CCPD: Continuous Cycling Peritoneal Dialysis; OPD: outpatient department