

**MEASURES ASSESSMENT TOOL (MAT)**

Tag	Condition/Standard	Measure	Values	Reference	Source
<b>494.40 Water and dialysate quality:</b>					
V196 V196 V178 V180	Water quality	Max. chloramine (must determine) Max. total chlorine (may determine) Action / Max. bacteria – product water / dialysate Action / Max. endotoxin – product water / dialysate	≤0.1 mg/L daily/shift ≤0.5 mg/L daily/shift 50 CFU/mL / <200 CFU/mL 1 EU/mL / <2 EU/mL (endotoxin units)	AAMI RD52	Records
<b>494.50 Reuse of hemodialyzers and blood lines (only applies to facilities that reuse dialyzers &amp;/or bloodlines)</b>					
V336	Dialyzer effectiveness	Total cell volume (hollow fiber dialyzers)	Measure original volume Discard if after reuse <80% of original	KDOQI HD Adequacy 2006; AAMI RD47	Records Interview
<b>494.80 Patient assessment:</b> The interdisciplinary team (IDT), patient/designee, RN, MSW, RD, physician must provide each patient with an individualized & comprehensive assessment of needs					
V502 V503 V504 V505 V506 V507 V508 V509 V510 V511 V512  V513 V514 V515	- Health status/comorbidities - Dialysis prescription - BP & fluid management - Lab profile - Immunization & meds history - Anemia (Hgb, Hct, iron stores, ESA need) - Renal bone disease - Nutritional status - Psychosocial needs - Dialysis access type & maintenance - Abilities, interests, preferences, goals, desired level of participation in care, preferred modality & setting, outcomes expectations  - Suitability for transplant referral - Family & other support systems - Current physical activity level & referral to voc & physical rehab	- Medical/nursing history, physical exam findings - Evaluate: HD every mo; PD first mo & q 4 mo - Interdialytic BP & wt gain, target wt, symptoms - Monitor labs monthly & as needed - Pneumococcal, hepatitis, influenza; med allergies - Volume, bleeding, infection, ESA hypo-response - Calcium, phosphorus, PTH & medications - Multiple elements listed - Multiple elements listed - Access efficacy, fistula candidacy - Reason why patient does not participate in care, reason why patient is not a home dialysis candidate  - Reason why patient is not a transplant candidate - Composition, history, availability, level of support - Abilities & barriers to independent living; achieving educational & work goals	Refer to Plan of care & QAPI sections (below) for values	Conditions for Coverage  KDOQI Hypertension & Anti-Hypertensive Agents in CKD 2004 (BP) KDOQI HD Adequacy 2006 (volume)	Chart
<b>494.90 Plan of care</b> The IDT must develop & implement a written, individualized comprehensive plan of care that specifies the services necessary to address the patient’s needs as identified by the comprehensive assessment & changes in the patient’s condition, & must include measurable & expected outcomes & estimated timetables to achieve outcomes. Outcome goals must be consistent with current professionally accepted clinical practice standards.					
V543	(1) Dose of dialysis: volume	Management of volume status	Euvolemic & BP 130/80 (adult); lower of 90% of normal for age/ht/wt or 130/80 (pediatric)	KDOQI HD Adequacy 2006	Chart
V544	(1) Dose of dialysis (HD adequacy)	Adult HD <5 hours 3x/week Adult HD 2x/week, RKF <2 mL/min HD 4-6x/week	Kt/V ≥1.2; Min. 3 hours/tx if RKF <2ml/min Inadequate treatment frequency Min. Kt/V ≥2.0/week	KDOQI HD Adequacy 2006	DFR
V544	(1) Dose of dialysis (PD adequacy)	Adult PD patient <100 mL urine output/day Pediatric PD patients, low urine urea clearance	Min. delivered Kt/V <sub>urea</sub> ≥1.7/week Min. delivered Kt/V <sub>urea</sub> ≥1.8/week	KDOQI PD Adequacy 2006	Chart
V545	(2) Nutritional status Monitored monthly	Albumin Body weight Other parameters in Patient assessment V509	≥4.0 g/dL bromocresol green (BCG) method % usual weight, % standard weight, BMI, estimated % body fat	KDOQI Nutrition 2000 KDOQI CKD 2003	Chart
V546	(3) Mineral metabolism & renal bone disease	Calcium Phosphorus Intact PTH q 3 months	All: >8.4 mg/dL & <10.2 mg/dL All: 3.5-5.5 mg/dL Adult: 150-300 pg/mL (16.5-33.0 pmol/L) Pediatric 200-300 pg/mL	KDOQI Bone Metabolism & Disease 2003	Chart
V547 V548 V549	(4) Anemia Monitor Hgb/Hct monthly Monitor iron stores routinely	Adult & pediatric Hgb on ESAs Adult & pediatric Hgb off ESAs Adult & pediatric: transferrin saturation Adult & pediatric: serum ferritin	Hgb: <12.0 g/dL <sup>3</sup> Hgb: 10-12.0 g/dL <sup>4</sup> Hgb: >10.0 g/dL <sup>4</sup> Hgb: 11-12.0 g/dL, ≤13.0 g/dL <sup>5</sup> >20% (HD, PD), or CHr >29 pg/cell <sup>6</sup> HD: >200 ng/mL; PD: >100 ng/mL <sup>6</sup>	<sup>3</sup> =FDA “black box” warning <sup>4</sup> =Medicare reimbursement policy <sup>5</sup> =KDOQI Anemia CKD 2007 <sup>6</sup> =KDOQI Anemia 2006	DFR

**Source options:** DFR=Dialysis Facility Reports CW=CROWNWeb Chart=Patient Chart Records=Facility Records Interview=Patient/Staff Interview

**Abbreviations:** BMI = Body mass index; CFU=colony forming units; RKF=residual kidney function; CHr=reticulocyte hemoglobin; ESA=erythropoiesis stimulating agent  
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Tag	Condition/Standard	Measure	Values	Reference	Source
			HD/PD: <500 ng/mL or evaluate if indicated <sup>6</sup>		
V550 V551	(5) Vascular access	Fistula Graft Central Venous Catheter	Preferred <sup>1,2</sup> Acceptable if fistula not possible <sup>1,2</sup> Avoid, unless bridge to fistula/graft or to PD, if transplant soon, or in small adult/peds pt <sup>1</sup>	<sup>1</sup> =KDOQI Vascular Access 2006 <sup>2</sup> =Fistula First	DFR Interview CW
V552	(6) Psychosocial status	Survey physical & mental functioning annually KDQOL-36 survey annually	Achieve & sustain average or lower case mix adjusted risk & no score declining ≥10 points	Conditions for Coverage CMS CPM; DOPPS	Chart Interview
V553 V554	(7) Modality	Home dialysis referral Transplantation referral	Candidacy or reason for non-referral	Conditions for Coverage	Chart Interview
V555	(8) Rehabilitation status	Productive activity desired by patient Pediatric: formal education needs met Vocational & physical rehab referrals as indicated	Achieve & sustain appropriate level, unspecified	Conditions for Coverage	Chart Interview
V562	(d) Patient education & training	Dialysis experience, treatment options, self-care, QOL, infection prevention, rehabilitation	Documentation of education in record	Conditions for Coverage CMS CPM 4/1/2008	Records Interview
<b>494.110 Quality assessment &amp; performance improvement (QAPI):</b> The dialysis facility must develop, implement, maintain, & evaluate an effective, data-driven QAPI program with participation by the professional members of the IDT. The program must reflect the complexity of the organization & services (including those under arrangement), & must focus on indicators related to improved health outcomes & the prevention & reduction of medical errors. The dialysis facility must maintain & demonstrate evidence of its QAPI program including continuous monitoring for CMS review.					
V629	(i) HD adequacy (monthly) (i) PD adequacy (rolling average each patient tested ≤4 months)	HD: Adult (patient with ESRD ≥3 mo) PD: Adult	% with spKt/V ≥1.2 or URR ≥65% (conventional 3 times/week dialysis) % with weekly Kt/V <sub>urea</sub> ≥1.7 (dialysis+RKF)	Conditions for Coverage CMS CPM 4/1/2008 (all)	DFR Records
V630	(ii) Nutritional status	Unspecified in Conditions for Coverage & CPMs Refer to parameters in Patient assessment V509	↑ % within target range	Conditions for Coverage	Records
V631	(iii) Mineral metabolism/renal bone disease	Calcium, phosphorus, & PTH	↑ % in target range monthly	Conditions for Coverage CMS CPM 4/1/2008	Records
V632	(iv) Anemia management Patients taking ESAs &/or Patients not taking ESAs	Mean hemoglobin (patient with ESRD ≥3 mo) Mean hematocrit Serum ferritin & transferrin saturation or CHR	↑ % with mean 10-12 g/dL ↑ % with mean 30-36% Evaluate if indicated	Conditions for Coverage CMS CPM 4/1/2008 (all)	DFR Records
V633	(v) Vascular access (VA) Evaluation of VA problems, causes, solutions	Cuffed catheters > 90 days AV fistulas for dialysis using 2 needles Thrombosis episodes Infections per use-life of accesses VA patency	↓ to <10% <sup>1</sup> ↓ to ≥65% <sup>1</sup> or ≥66% <sup>2</sup> ↓ to <0.25/pt/yr (fistula) or 0.50/pt/yr(graft) ↓ to <1% (fistula); <10% (graft) ↑ % with fistula >3 yrs & graft >2 yrs	<sup>1</sup> =KDOQI 2006 <sup>2</sup> =Fistula First CMS CPM 4/1/2008	DFR Records CW 2/09
V634	(vi) Medical injuries & medical errors identification	Medical injuries & medical errors reporting	↓ frequency through prevention, early identification & root cause analysis	Conditions for Coverage	Records
V635	(vii) Reuse	Evaluation of reuse program including evaluation & reporting of adverse outcomes	↓ adverse outcomes	Conditions for Coverage	DFR Records
V636	(viii) Patient satisfaction & grievances	Report & analyze grievances for trends CAHPS In-Center Hemodialysis Survey available Other surveys for pediatric & home patients	Prompt resolution of patient grievances ↑ % of patients satisfied with care	Conditions for Coverage CMS CPM 4/1/2008	Records Interview
V637	(ix) Infection control	Analyze & document incidence for baselines & trends	Minimize infections & transmission of same Promote immunizations	Conditions for Coverage	DFR Records
V637	Vaccinations	Hepatitis B, influenza, & pneumococcal vaccines Influenza vaccination by facility or other provider	Documentation of education in record ↑ % of patients vaccinated on schedule ↑ % of patients receiving flu shots 10/1-3/31	Conditions for Coverage CMS CPM 4/1/2008	Records
V627	Health outcomes: Physical & mental functioning	Survey adult/pediatric patients KDQOL-36 survey annually	Achieve & sustain appropriate status ↑ % completing survey	Conditions for Coverage CMS CPM 4/1/2008	Records
V627	Health outcomes: Patient survival	Standardized mortality ratio (1.0 is average, >1.0 is worse than average, <1.0 is better than average)	↓ mortality	Conditions for Coverage CMS CPM 4/1/08	DFR

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