

**MEASURES ASSESSMENT TOOL (MAT)**

Tag	Condition/Standard	Measure	Values	Reference	Source
<b>494.40 Water and dialysate quality:</b>					
V196	Water quality; test for total chlorine	Max. total chlorine (includes chloramines)	≤0.1 mg/L daily/shift	AAMI RD52	Records
V178	Water & dialysate quality/test for microbiological contamination	Action / Max. bacteria – product water / dialysate	50 CFU/mL / <200 CFU/mL		
V180		Action / Max. endotoxin – product water / dialysate	1 EU/mL / <2 EU/mL (endotoxin units)		
<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 (TCV) of (hollow fiber dialyzers	Measure original volume/TCV Discard if after reuse <80% of original TCV	KDOQI HD Adequacy 2006 AAMI RD47	Records Interview
<b>494.80 Patient assessment: The interdisciplinary team (IDT), patient/designee, RN, MSW, RD, physician must provide each patient with an individualized &amp; comprehensive assessment of needs</b>					
V502	- Health status/comorbidities	- Medical/nursing history, physical exam findings	Refer to Plan of care & QAPI sections (below) for values	Conditions for Coverage KDOQI Guidelines (see POC)	Chart Interview
V503	- Dialysis prescription	- Evaluate: HD every mo; PD first mo & q 4 mo			
V504	- BP & fluid management	- Interdialytic BP & wt gain, target wt, symptoms			
V505	- Lab profile	- Monitor labs monthly & as needed			
V506	- Immunization & meds history	- Pneumococcal, hepatitis, influenza; med allergies			
V507	- Anemia (Hgb, Hct, iron stores, ESA need)	- Volume, bleeding, infection, ESA hypo-response			
V508	- Renal bone disease	- Calcium, phosphorus, PTH & medications			
V509	- Nutritional status	- Multiple elements listed			
V510	- Psychosocial needs	- Multiple elements listed			
V511	- Dialysis access type & maintenance	- Access efficacy, fistula candidacy			
V512	- Abilities, interests, preferences, goals, desired participation in care, preferred modality & setting, expectations for outcomes	- Reason why patient does not participate in care, reason why patient is not a home dialysis candidate			
V513	- Suitability for transplant referral	- Reason why patient is not a transplant candidate			
V514	- Family & other support systems	- Composition, history, availability, level of support			
V515	- Current physical activity level & referral to vocational & physical rehabilitation	- Abilities & barriers to independent living; achieving physical activity, education & work goals			
<b>494.90 Plan of care</b> The IDT must collaboratively develop & implement a written, individualized 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. Citations are based on facility IDT failure to recognize & implement strategies for improvement when individual patients' outcomes are out of range, not on out-of-range outcomes alone.					
V543	(1) Dose of dialysis/volume status Monitor each treatment	Management of volume status	Euvoletic & pre-BP <140/90; post-BP <130/80 (adult); lower of 90% of normal for age/ht/wt or 130/80 (pediatric)	KDOQI HD Adequacy 2006 KDOQI Cardiovascular 2005	Chart Interview
V544	(1) Dose of dialysis (HD adequacy) Monitor adequacy monthly	Adult HD <5 hours 3x/week, minimum spKt/V Adult HD 2x/week, RKF <2 mL/min. HD 2, 4-6x/week, minimum stdKt/V	≥1.2 (or URR≥65); Min. 3 hours/tx if RKF <2ml/min Inadequate treatment frequency ≥2.0/week	NQF #0249 (adult) NQF #1423 (peds) KDOQI HD Adequacy 2006	Chart Interview
V544	(1) Dose of dialysis (PD adequacy – adult) Monitor 1 <sup>st</sup> month & every 4 months	Minimum delivered Kt/V <sub>urea</sub>	≥1.7/week	NQF #0318 KDOQI PD Adequacy 2006	Chart Interview
V544	(1) Dose of dialysis (PD adequacy – pediatric) Monitor 1 <sup>st</sup> month & every 6 months	Minimum delivered Kt/V <sub>urea</sub>	≥1.8/week	KDOQI PD Adequacy 2006	Chart Interview
V545	(2) Nutritional status - Monitor albumin & body wt monthly; monitor other parameters at V509 as needed	Albumin Body weight & other parameters listed at V509	≥4.0 g/dL BCG preferred; if BCP: lab normal % usual wt, % standard wt, BMI, est. % body fat	KDOQI Nutrition 2000 KDOQI CKD 2002	Chart Interview
V545	(2) Nutritional status (pediatric) monitor monthly	Length/ht-for-age % or SD, dry wt & wt-for-age % or SD, BMI-for-ht/age % or SD, head circ/age % (age ≤3), nPCR	nPCR normalized-HD teen (nPCR and albumin are not predictive of wt loss/nutritional status in younger children)	KDOQI Pediatric Nutrition 2008	Chart Interview
V546	(3) Mineral metabolism & renal bone disease Monitor calcium & phosphorus monthly Monitor intact PTH every 3 months	Calcium uncorrected Phosphorus Intact PTH (consider with other MBD labs, not in isolation)	normal for lab or <10.2 mg/dL <sup>1</sup> (3 mo rolling average) All: 3.5-5.5 mg/dL <sup>2</sup> Under review	<sup>1</sup> NQF #1454 <sup>2</sup> KDIGO CKD-MBD 2009	Chart Interview
V547	(4) Anemia – Hgb <b>non-ESA</b> - monitor monthly	Hemoglobin (Adult & pediatric)	No safe upper level established <sup>3</sup> See Hgb on <b>ESA</b> (below) for management of anemia <sup>3</sup>	<sup>3</sup> FDA 6/24/11 for more info re CKD 5D recommendation	Chart Interview
V547	(4) Anemia – Hgb on <b>ESA</b> – monitor weekly until stable; then monitor monthly; evaluate other anemia causes; educate patients about risks/benefits	Hemoglobin (Adult & pediatric)	Initiate ESAs <10 g/dL; interrupt/ ↓ dose near or >11 g/dL <sup>3</sup>	<sup>3</sup> FDA 6/24/11 for more info re CKD 5D recommendation	Chart Interview
V548		Blood transfusion	Give lowest dose of ESAs to avoid transfusion (especially in transplant candidates); consider patient preference		
V549	(4) Anemia - Monitor iron stores routinely	Adult & pediatric: transferrin saturation Adult & pediatric: serum ferritin	>20% (HD, PD), or CHr >29 pg/cell HD: >200 ng/mL; PD: >100 ng/mL HD/PD: <500 ng/mL or evaluate if indicated	KDOQI Anemia 2006	Chart Interview

**Sources:** DFR=Dialysis Facility Reports; CW=CROWNWeb; Chart=Patient Chart; Records=Facility Records; Interview=Patient/Staff Interview; Abbreviations: BCG/BCP=bromocresol green/purple BMI=Body mass index; CAHPS=Consumer Assessment of Healthcare Providers & Services; CFU=colony forming units; CHR=reticulocyte hemoglobin; CMS CPM=CMS Clinical Performance Measure; DOPPS=Dialysis Outcomes & Practice Patterns Study; ESA=erythropoiesis stimulating agent; KDIGO=Kidney Disease Improving Global Outcomes; KDOQI=Kidney Disease Outcomes Quality Initiative, nPCR=normalized protein catabolic rate; NQF=National Quality Forum; RKF=residual kidney function; SD=standard deviation; spKt/V=single pool KtV

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V550 V551	(5) Vascular access (HD)	Fistula Graft Central Venous Catheter	Preferred, if appropriate <sup>4,5,7,8</sup> Acceptable if fistula not possible or appropriate <sup>5,6</sup> Acceptable if evaluated for fistula/graft <sup>6,8</sup> , if transplant soon, or if AVF/AVG not possible in small adult or peds pt <sup>5</sup>	<sup>4</sup> NQF #0257 <sup>5</sup> KDOQI Vascular Access 2006 <sup>6</sup> NQF #0251 <sup>7</sup> NQF #0256; <sup>8</sup> Fistula First	Chart Interview
V552	(6) Psychosocial status	Survey physical & mental functioning by standardized tool, e.g. KDQOL-36 survey or age appropriate survey	Documentation of action in response to results	Conditions for Coverage NQF #0260 (adult)	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	Chart Interview
<p><b>494.110 Quality assessment &amp; performance improvement (QAPI):</b> The dialysis facility must develop, implement, maintain, &amp; 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 &amp; services (including those under arrangement), &amp; must focus on indicators related to improved health outcomes &amp; the prevention &amp; reduction of medical errors. The dialysis facility must maintain &amp; demonstrate evidence of its QAPI program including continuous monitoring for CMS review. Refer to your ESRD Network's goals for targets for aggregate patient outcomes.</p>					
V628	Health outcomes: Physical & mental functioning	Survey adult/pediatric patients by standardized tool, e.g. KDQOL-36 survey or age appropriate survey	Achieve & sustain appropriate status ↑ % of eligible patients completing survey	Conditions for Coverage	Records
V628	Health outcomes: Patient hospitalization	Standardized hospitalization ratio (1.0 is average, >1.0 is worse than average, <1.0 is better than average)	↓ unplanned hospitalizations	Conditions for Coverage	DFR Records
V628	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	DFR Records
V629	(i) HD adequacy (monthly)	HD: Adult (patient with ESRD ≥3 mo)	↑ % with spKt/V ≥1.2 or URR ≥65% if 3 times/week dialysis and stdKt/V ≥2.0/week if 2 or 4-6 times/week dialysis	Conditions for Coverage NQF #0249 (adult) NQF #1423 (peds)	DFR Records
V629	(i) PD adequacy (rolling average, each patient tested ≤4 months)	PD: Adult	↑ % with weekly Kt/V <sub>urea</sub> ≥1.7 (dialysis+RKF)	Conditions for Coverage NQF #0318	DFR Records
V630	(ii) Nutritional status	Facility set goals; refer to parameters listed in V509	↑ % of patients within lab target range on albumin and other nutritional parameters set by the facility	Conditions for Coverage; KDOQI Nutrition 2000 KDOQI CKD 2002	Records
V631	(iii) Mineral metabolism/renal bone disease	Calcium, phosphorus, & PTH	↑ % in target range on all measures monthly	Conditions for Coverage	Records
V632	(iv) Anemia management Monitor patients on ESAs &/or patients not taking ESAs	Anemia symptoms Blood transfusion Serum ferritin & transferrin saturation or Chr Patient education on ESAs	↓ % of patients with anemia symptoms ↓ % of patients (esp. transplant candidates) transfused Evaluate if indicated ↑ % of patients educated about potential risks/benefits	FDA 6/24/11 for more info re CKD 5D recommendation	DFR Records Interview
V633	(v) Vascular access (VA) Evaluation of VA problems, causes, solutions	Cuffed catheters > 90 days AV fistulas for dialysis using 2 needles, if appropriate Thrombosis episodes Infections per use-life of access VA patency	↓ to <10% <sup>6</sup> ↑ to ≥65% <sup>6</sup> or ≥66% <sup>7</sup> ↓ to <0.25/pt-yr at risk for fistulas; 0.50/pt-yr at risk for (grafts) ↓ to <1% (fistula); <10% (graft) ↑ % with fistula >3 yrs & graft >2 yrs	<sup>5</sup> KDOQI Vascular Access 2006 <sup>8</sup> Fistula First	DFR Records
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	Records
V636	(viii) Patient satisfaction & grievances	Report & analyze grievances for trends CAHPS In-Center Hemodialysis Survey or other survey	Prompt resolution of patient grievances ↑ % of patients satisfied with care	Conditions for Coverage	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 NQF #0226	Records DFR

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