

# 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:</b> The interdisciplinary team (IDT), patient/designee, RN, MSW, RD, physician must provide each patient with an individualized & comprehensive assessment of needs					
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) Avoid ultrafiltration rate ≥ 13 ml/kg/hr	KDOQI HD Adequacy 2006 KDOQI Cardiovascular 2005 NQF #2701	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 <b>on ESA</b> – monitor weekly until stable; then monitor monthly; evaluate other anemia causes; educate patients about risks/benefits	Hemoglobin (Adult & pediatric) Blood transfusion	Initiate ESAs <10 g/dL; interrupt/ ↓ dose near or >11 g/dL <sup>3</sup> Give lowest dose of ESAs to avoid transfusion (especially in transplant candidates); consider patient preference	<sup>3</sup> FDA 6/24/11 for more info re CKD 5D recommendation	Chart Interview
V548					
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 Kt/V

### MEASURES ASSESSMENT TOOL (MAT)

Tag	Condition/Standard ➡	Measure ➡	Values ➡	Reference ➡	Source
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	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
<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. Refer to your ESRD Network's goals for targets for aggregate patient outcomes.					
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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