### Measures Assessment Tool (MAT)

<table>
<thead>
<tr>
<th>Tag</th>
<th>Condition/Standard</th>
<th>Measure</th>
<th>Values</th>
<th>Reference</th>
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</tr>
</thead>
<tbody>
<tr>
<td>494.40</td>
<td>Water and dialysate quality:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V196</td>
<td>Water quality, test for total chlorine</td>
<td>Max. total chlorine (includes chloramines)</td>
<td>≤0.1 mg/L daily/shift</td>
<td></td>
<td>Records</td>
</tr>
<tr>
<td>V178</td>
<td>Water &amp; dialysate quality/test for microbiological contamination</td>
<td>Action / Max. bacteria – product water / dialysate</td>
<td>≤0.1 mg/L daily/shift</td>
<td></td>
<td>Records</td>
</tr>
<tr>
<td>V180</td>
<td>Dialyzer effectiveness</td>
<td>Total cell volume (TCV) of (hollow fiber dialyzers)</td>
<td></td>
<td>KDQI HD Adequacy 2006</td>
<td>AAMI RD47</td>
</tr>
</tbody>
</table>

### 494.50 Reuse of hemodialyzers and blood lines (only applies to facilities that reuse dialyzers &/or bloodlines)

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<tbody>
<tr>
<td>V536</td>
<td>Dialyzer effectiveness</td>
<td>Total cell volume (TCV) of (hollow fiber dialyzers)</td>
<td></td>
<td>KDQI HD Adequacy 2006</td>
<td>AAMI RD47</td>
</tr>
</tbody>
</table>

### 494.80 Patient assessment: The interdisciplinary team (IDT).

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</tr>
</thead>
<tbody>
<tr>
<td>V502</td>
<td>Health status/ comorbidities</td>
<td>Medical/nursing history, physical exam findings</td>
<td></td>
<td>Refer to Plan of care &amp; QAPI sections (below) for values</td>
<td>Conditions for Coverage</td>
</tr>
<tr>
<td>V503</td>
<td>Dialysis prescription</td>
<td></td>
<td></td>
<td></td>
<td>KDQI Guidelines (see POC)</td>
</tr>
<tr>
<td>V504</td>
<td>BP &amp; fluid management</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V505</td>
<td>Lab profile</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V506</td>
<td>Immunization &amp; meds history</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V507</td>
<td>Anemia (Hgb, Hct, iron stores, ESA need)</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V508</td>
<td>Renal bone disease</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V509</td>
<td>Nutritional status</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V510</td>
<td>Psychosocial needs</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V511</td>
<td>Dialysis access type &amp; maintenance</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V512</td>
<td>Abilities, interests, preferences, goals, desired participation in care, preferred modality &amp; setting, expectations for outcomes</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V513</td>
<td>Suitability for transplant referral</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V514</td>
<td>Family &amp; other support systems</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V515</td>
<td>Current physical activity level &amp; referral to vocational &amp; physical rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td>Chart Interview</td>
</tr>
</tbody>
</table>

### 494.90 Plan of care

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.

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<tbody>
<tr>
<td>V543</td>
<td>(1) Dose of dialysis/volume status</td>
<td>Management of volume status</td>
<td></td>
<td>KDQI HD Adequacy 2006</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V544</td>
<td>(1) Dose of dialysis (HD adequacy)</td>
<td>Adult HD &lt;5 hours 3x/week, minimum spKt/V</td>
<td>≤1.2 (or URR&gt;65); Min. 3 hours/tx if RKF &lt;2ml/min inadequate treatment frequency</td>
<td>NQF #2701</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V545</td>
<td>(1) Dose of dialysis (PD adequacy – adult)</td>
<td>Monitor 1st month &amp; every 4 months</td>
<td>&gt;1.7/week</td>
<td>NQF #0318</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V546</td>
<td>(1) Dose of dialysis (PD adequacy – pediatric)</td>
<td>Monitor 1st month &amp; every 4 months</td>
<td>&gt;1.8/week</td>
<td>KDQI PD Adequacy 2006</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V547</td>
<td>(2) Nutritional status - Monitor albumin &amp; body wt monthly; monitor other parameters at V509 as needed</td>
<td></td>
<td></td>
<td>KDQI Nutrition 2000</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V548</td>
<td>(2) Nutritional status (pediatric) monitor monthly</td>
<td></td>
<td></td>
<td>KDQI CKD 2002</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V549</td>
<td>(3) Mineral metabolism &amp; renal bone disease</td>
<td>Calcium uncorrected Phosphorus Intact PTH (consider with other MBD labs, not in isolation)</td>
<td>normal for lab or &lt;10.2 mg/dL (3 mo rolling average)</td>
<td>-NQF #1454</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V550</td>
<td>(4) Anemia – Hgb on ESA - monitor monthly</td>
<td>Hemoglobin (Adult &amp; pediatric)</td>
<td>No safe upper level established</td>
<td>FDA 6/24/11 for more info on KD KSD recommendation</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V551</td>
<td>(4) Anemia – Hgb on ESA</td>
<td></td>
<td></td>
<td>KDIGO Kidney Disease Outcomes Quality Initiative, nPCR normalized protein catabolic rate; NQF = National Quality Forum; RFK = residual kidney function; SD = standard deviation; spKt/V = single pool Kt/V</td>
<td>Chart Interview</td>
</tr>
</tbody>
</table>

**Sources:**
- DFR = Dialysis Facility Reports
- CW = CROWNWeb
- Chart = Patient Chart
- Records = Facility Records
- Interview = Patient/Staff Interview
- Abbreviations: BCG/BACP = 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
- KDQI = Kidney Disease Outcomes Quality Initiative
- nPCR = normalized protein catabolic rate
- NQF = National Quality Forum
- RFK = residual kidney function
- SD = standard deviation
- spKt/V = single pool Kt/V

**Centers for Medicare & Medicaid Services - Version 2.5 Page 1 of 2**
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<tr>
<td>V550</td>
<td>(5) Vascular access (HD)</td>
<td>Fistula</td>
<td>Preferred, if appropriate</td>
<td>≤10%</td>
<td>&lt;NQF #0257</td>
</tr>
<tr>
<td>V551</td>
<td></td>
<td></td>
<td>Acceptable if fistula not possible or appropriate</td>
<td>≤10%</td>
<td>KDOQI Vascular Access 2006 #0251</td>
</tr>
<tr>
<td>V552</td>
<td>(6) Psychosocial status</td>
<td>Survey physical &amp; mental functioning by standardized tool</td>
<td>Documentation of action in response to results</td>
<td>Conditions for Coverage</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V553</td>
<td>(7) Modality</td>
<td>Home dialysis referral</td>
<td>Candidacy or reason for non-referral</td>
<td>Conditions for Coverage</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V554</td>
<td></td>
<td>Transplantation referral</td>
<td></td>
<td>Conditions for Coverage</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V555</td>
<td>(8) Rehabilitation status</td>
<td>Productive activity desired by patient</td>
<td>Achieve &amp; sustain appropriate level, unspecified</td>
<td>Conditions for Coverage</td>
<td>Chart Interview</td>
</tr>
<tr>
<td>V556</td>
<td>(d) Patient education &amp; training</td>
<td>Dialysis experience, treatment options, self-care, QOL, infection prevention, rehabilitation</td>
<td>Documentation of education in record</td>
<td>Conditions for Coverage</td>
<td>Chart Interview</td>
</tr>
</tbody>
</table>

### 494.110 Quality assessment & performance improvement (QAPI):

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. KDOQI-36 survey or age appropriate survey
- Achieve & sustain appropriate status
  - 1% of eligible patients completing survey
- Conditions for Coverage: Records

**V629 HD adequacy (monthly)**
- HD: Adult (patient with ESRD ≥3 mo)
  - 1% 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)
- Records

**V630 Nutritional status**
- Facility sets goals; refer to parameters listed in V509
  - 1% of patients within lab target range on albumin and other nutritional parameters set by the facility
- Records

**V631 Mineral metabolism/renal bone disease**
- Calcium, phosphorus, & PTH
  - 1% in target range on all measures monthly
- Conditions for Coverage: Records

**V632 Anemia management**
- Monitor patients on ESAs &/or patients not taking ESAs
  - Anemia symptoms
  - Basic transfusion
  - Serum ferritin & transferrin saturation or CHr
  - Evaluate if indicated
  - 1% of patients with anemia symptoms
  - 1% of patients (exp. transplant candidates) transfused
  - 1% of patients educated about potential risks/benefits
  - FDA 6/24/11 for more information
  - OKD 5D recommendation
- Conditions for Coverage: Records

**V633 Vascular access (VA)**
- Cuffed catheters > 90 days
  - AV fistulas for dialysis using 2 needles, if appropriate
  - Thrombosis episodes
  - Infections per use-life of access
  - Patient education on ESAs
  - Evaluate if indicated
  - 1% of patients with fistula > 3 yrs & graft > 2 yrs
  - ≥1.7 (dialysis+RKF)
  - ≤10% & 1% ≥65% or ≥66%
  - ≤0.25/pt yr at risk for fistulas; 0.50/pt yr at risk for (grafts)
  - 1% of patients referred for transplant candidates; 1% of patients referred for transplant candidates
  - %KDOQI Vascular Access2006 Fistula First
- Records

**V634 Medical injuries & medical errors identification**
- Medical injuries & medical errors reporting
  - Frequency through prevention, early identification & root cause analysis
- Conditions for Coverage: Records

**V635 Reuse**
- Evaluation of reuse program including evaluation & reporting of adverse outcomes
  - 1% adverse outcomes
- Conditions for Coverage: Records

**V636 Patient satisfaction & grievances**
- Report & analyze grievances for trends
  - CAHPS In-Center Hemodialysis Survey or other survey
  - Prompt resolution of patient grievances
  - 1% of patients satisfied with care
  - Conditions for Coverage: Records

**V637 Infection control**
- Analyze & document incidence for baselines & trends
  - Minimize infections & transmission of same
  - Promote immunizations
  - Conditions for Coverage: Records

**V638 Vaccinations**
- Hepatitis B, influenza, & pneumococcal vaccines
  - Influenza vaccination by facility or other provider
  - Documentation of education in record
  - Conditions for Coverage: NQF #0226
- Records

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Centers for Medicare & Medicaid Services - Version 2.5