The CKD Task Force/Collaborative is a body of community partners and primary and specialty physicians working with HealthInsight to improve the quality of chronic kidney disease detection and care in Nevada and Utah. The Task Force/Collaborative has adopted the guidelines referenced below and prepared this two-page abstract to encourage more widespread use of evidence-based care for people with chronic kidney disease and as a foundation for Task Force/Collaborative goals and objectives.

With your help we hope to understand the current status of care in the states, identify barriers and system level changes to address these barriers, and discover successful interventions, both office based and statewide, that will be demonstrated by positive movement in our clinical measures targets: screening patients at risk for CKD (timely testing), use of ACEI/ARB to slow progression of disease and early education and referral when renal replacement may be indicated (as measured by presence and use of an AV Fistula at time of first dialysis).

Patients at increased risk for kidney disease include those with: Diabetes type 1 or 2, at any presentation (new or chronic), hypertension, a family history of kidney failure and cardiovascular disease.

<table>
<thead>
<tr>
<th>QUALITY MEASURE</th>
<th>NEVADA BASELINE</th>
<th>NEVADA TARGET</th>
<th>QUALITY MEASURE</th>
<th>UTAH BASELINE</th>
<th>UTAH TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely Testing</td>
<td>79.5%</td>
<td>87.5%</td>
<td>Timely Testing</td>
<td>80.1%</td>
<td>88.1%</td>
</tr>
<tr>
<td>Use of ACEI/ARB</td>
<td>77.7%</td>
<td>85.5%</td>
<td>Use of ACEI/ARB</td>
<td>82.5%</td>
<td>90.7%</td>
</tr>
<tr>
<td>AV Fistula</td>
<td>34.8%</td>
<td>36.3%</td>
<td>AV Fistula</td>
<td>47.3%</td>
<td>47.5%</td>
</tr>
</tbody>
</table>

(Source – NKF) Chronic Kidney Disease: A Clinical Action Plan

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>GFR (mL/min/1.73m²)</th>
<th>Action*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kidney damage with normal or ↑ GFR</td>
<td>≥90 (with CKD risk factors)</td>
<td>Screening CKD risk reduction</td>
</tr>
<tr>
<td>2.</td>
<td>Kidney damage with mild ↓ GFR</td>
<td>60-89</td>
<td>Diagnosis and treatment of co morbid conditions, slowing progression, CVD risk reduction</td>
</tr>
<tr>
<td>3.</td>
<td>Moderate ↓ GFR</td>
<td>30-59</td>
<td>Estimating progression</td>
</tr>
<tr>
<td>4.</td>
<td>Severe ↓ GFR</td>
<td>15-29</td>
<td>Evaluating and treating complications</td>
</tr>
<tr>
<td>5.</td>
<td>Kidney Failure</td>
<td>&lt;15 (or dialysis)</td>
<td>Preparation for kidney replacement therapy</td>
</tr>
</tbody>
</table>

Shaded area identifies patients who have chronic kidney disease; unshaded area designates individuals who are at increased risk for developing chronic kidney disease. Chronic kidney disease is defined as either kidney damage or GFR <60 mL/min/1.73 m² for ≥3 months. Kidney damage is defined as pathologic abnormalities or markers of damage, including abnormalities in blood or urine tests or imaging studies.

* Includes actions from preceding stages.

Abbreviations: GFR, glomerular filtration rate; CKD, chronic kidney disease; CVD, cardiovascular disease.

Consider Nephrology Referral beginning at Stage 4 and/or at Stage 3 (for co-management where appropriate)

Complete text available at: National Kidney Foundation (NKF) www.kidney.org/professionals/kdoqi/guidelines
American Diabetes Association (ADA) http://care.diabetesjournals.org/content/vol31/Supplement_1/
### Chronic Kidney Disease Initiative – Adoption of evidence based guidelines
Abstract from NKF, ADA and specialty expertise of guidelines related to project measures

<table>
<thead>
<tr>
<th>GUIDELINE SOURCE</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NKF 1. Definition and Stages of Chronic Kidney Disease</td>
<td>Adverse outcomes of chronic kidney disease (Chronic Kidney Disease (CKD) is defined as either kidney damage or GFR &lt; 60 ml/min/1.73 m² for &gt;= 3 months) can often be prevented or delayed through early detection and treatment.</td>
</tr>
</tbody>
</table>
| NKF 2. Evaluation and Treatment | Patients with chronic kidney disease should be evaluated to determine:  
  - Diagnosis (type of kidney disease);  
  - Co morbid conditions;  
  - Severity, assessed by level of kidney function;  
  - Complications, related to level of kidney function;  
  - Risk for loss of kidney function;  
  - Risk for cardiovascular disease.  
  
  Treatment of chronic kidney disease should include:  
  - Specific therapy, based on diagnosis;  
  - Evaluation and management of co morbid conditions;  
  - Slowing the loss of kidney function;  
  - Prevention and treatment of cardiovascular disease;  
  - Prevention and treatment of complications of decreased kidney function;  
  - Preparation for kidney failure and kidney replacement therapy;  
  - Replacement of kidney function by dialysis and/or transplantation if indicated. |
| NKF 4. Estimation of GFR (calculator available on-line) | Estimates of GFR are the best overall indices of the level of kidney function. The level of GFR should be estimated from prediction equations that take into account the serum creatinine concentration and some or all of the following variables: age, gender, race, and body size. |
| NKF 5. Assessment of Proteinuria | Patients at risk for CKD should be screened for proteinuria. In most cases, screening with urine and albumin-specific dipsticks is acceptable for detecting proteinuria.  
  
  If dip stick negative, persons at risk should be screened using a spot urine sample albumin – to – creatinine ratio. |
| NKF 7. Association of Level of GFR with Hypertension | High blood pressure is both a cause and a complication of chronic kidney disease. Blood pressure should be closely monitored in all patients with chronic kidney disease. In general the target blood pressure should be <130/80.  
  
  ADA  
  Persons with chronic kidney disease and diabetes with microalbumin should be treated with ACEI/ARB irrespective of blood pressure.  
  
  Nephrology  
  Persons with proteinuria should have tighter blood pressure control of <125/<75. |
| NKF 13. Factors associated with loss of kidney function in CKD | The level of kidney function tends to decline progressively over time in most patients with CKD. The rate of GFR decline should be assessed in patients with chronic kidney disease (frequency dependent on stage and rate of progression) to:  
  - Predict the interval until the onset of kidney failure;  
  - Assess the effect of interventions to slow the GFR decline.  
  
  Interventions to slow the progression of kidney disease should be considered in all patients with chronic kidney disease. Those proven to be effective include:  
  - Strict glucose control in diabetes;  
  - Strict blood pressure control;  
  - Angiotensin-converting enzyme inhibition or angiotensin-2 receptor blockade. |

NKF = National Kidney Foundation, ADA = American Diabetes Association

CKD Task Force/Collaborative adoption - December 2008/January 2009

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