



Michigan Quality Improvement Consortium Guideline

Diagnosis and Management of Adults with Chronic Kidney Disease

The following guideline recommends diagnosis and aggressive management of chronic kidney disease by clinical stage.

| Eligible Population | Key Components | Recommendation and Level of Evidence | Frequency |
|--------------------------------------|--|--|---|
| All adults at increased risk for CKD | Screening & Diagnosis | For patients at increased risk for CKD (e.g., diabetes, hypertension, family history of kidney failure, etc.) assess for markers of kidney damage: <ul style="list-style-type: none"> ♦ Measure blood pressure [A] ♦ Obtain serum creatinine and estimated GFR¹. If <60, repeat within 90 days. ♦ Protein-to-creatinine ratio or albumin-to-creatinine ratio (first morning or random spot urine specimen) ♦ Urinalysis, fasting lipid profile, electrolytes, BUN | <ul style="list-style-type: none"> ♦ Semi-annual blood pressure monitoring; more frequent monitoring if indicated ♦ Monitor GFR every 1-2 years |
| | Risk Factor Management & Patient Education | <ul style="list-style-type: none"> ♦ Evaluation and management of comorbid conditions (e.g. diabetes, hypertension, urinary tract obstruction, cardiovascular disease)² ♦ Educate on therapeutic lifestyle changes based on GFR: weight maintenance if BMI < 25, weight loss if BMI ≥ 25, exercise and physical activity, moderation of alcohol intake, smoking cessation | At each routine health exam |
| Adults with CKD | Core Principles of Treatment [D] | <ul style="list-style-type: none"> ♦ Review medications for dose adjustment, drug interactions, adverse effects, therapeutic levels ♦ Update vaccines: HBV, influenza, Tdap and Pneumovax ♦ Dietary sodium intake < 2.4 g/d recommended for patients with CKD and hypertension [A] ♦ Incorporate self-management behaviors into treatment plan at all stages of CKD [B] ♦ Develop clinical action plan for each patient, based on disease stage as defined by the National Kidney Foundation, Kidney Disease Outcomes Quality Initiative (K/DOQI³) [B] | As indicated |
| | | <ul style="list-style-type: none"> ♦ Stage 1 (GFR >90): Monitor GFR annually, smoking cessation, consider ACE and/or ARB therapy, BP goal <130/80, LDL-C goal < 100 ♦ Stage 2 (GFR 60-89): Nephrology referral if GFR decline > 4ml/min/yr, maintain BP and lipid goals as above. ♦ Stage 3 (GFR 30-59): Nephrology consult to include abnormalities of PTH, VitD, Ca, and phosphorus, or GFR <45. Avoid contrast, if possible. Avoid NSAIDs, low-dose ASA allowed. ♦ Stage 4 (GFR 15-29): Nephrology referral. CKD education classes. Avoid ASA and NSAIDs. ♦ Stage 5 (GFR < 15): Renal replacement therapy | |

¹ If not calculated by lab, refer to the National Kidney Foundation website for GFR calculator (<http://www.kidney.org/professionals/tools/>)

² Reference MQIC guidelines on diabetes, hypertension, hypercholesterolemia, and obesity (www.mqic.org).

³ <http://www.kidney.org/professionals/kdoqi/>

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. Individual patient considerations and advances in medical science may supersede or modify these recommendations.